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## MULTIDIMENSIONAL TRANSLATION



## Challenges of Multidimensional Translation

Saarbrücken 2-6 May 2005

# Proceedings

edited by

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*MuTra: Challenges of Multidimensional Translation*

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# Introducing Multidimensional Translation

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- 1 The Setting
- 2 Multidimensional Translation: Concept and Methodology
- 3 Multidimensional Translation: The MuTra Project
- 4 Concluding remarks
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## Abstract

The following article is a revised and updated version of the opening address to the first event of the Marie Curie conference series ‘Multidimensional Translation’ (MuTra) held on May 2nd, 2005 in Saarbrücken. It describes the concept and methodology of Multidimensional Translation as a research project proposed to and accepted for funding by the European Union. The EU’s generous financial support made it possible to develop the topic as described below and provide momentum to a research area in intercultural communication transfer which integrates the disparate subfields of audiovisual translation, audiodescription, theater translation, knowledge management & LSP translation and various types of interpreting within a framework of a common theoretical profile. My special thanks go to the European Union for making this possible and to all contributors of this conference on translation in its multidimensional forms.

## 1 The Setting

### 1.1 Translation Theory: A Historical Perspective

Translation has a centuries-long tradition and has historically raised many complex and controversial scientific questions in a number of disciplines (for an overview cf. George Steiner 1992). In theology (Bible translation) the ‘literal’ versus ‘free’ issue was raised as early as Jerome (395), has proceeded to Luther (1530) and Buber (1954) and is still a topic in today’s ‘translation science’ (Nida 1964, Berger/Nord 1999). In literary studies, the issue of fidelity in translation has traditionally played a prominent role (Schleiermacher 1813, Benjamin 1923). In addition, in the field of literary history, descriptive translation studies have examined the status and function of translations in the target culture (Even-Zohar 1978, Toury 1995). In philosophy the controversy over the relationship between language and thought and the world’s cultural interpretation led to the development of the Sapir-Whorf hypothesis and Humboldt’s untranslatability thesis (Sapir 1968, Whorf 1956, Humboldt 1836). More recently, deconstruction has questioned the very notion of an original, as well as the belief in equivalence or fidelity (Derrida 1985). In semiotics interlingual translation forms part of the wider field of translation between any two sign systems (Jakobson 1959). Translation-relevant issues in semiotics include the nature of signs and codes (Peirce 1991, Eco 1975, 1984), and the relationship between different complex signs (Gorlée 1994). In anthropology the question of the translatability of cultures – translatability between different (and differentially empowered) cultures and languages, and between different discursive modes (from a way of life into academic discourse) – has been widely debated (Asad 1986, Clifford 1988,

Pálsson 1993). The issues of power, representation and translatability recur in postcolonial cultural studies (Bhabha 1994, Greenblatt 1991). Intercultural communication studies deals with both verbal and nonverbal communication between cultures (Clyne 1994, Gudykunst/Kim 1992, Göhring 2002). With the resulting diversity of solutions, comments and opinions from within these separate disciplines, it is natural that translation research has developed heterogeneously, dependent upon each discipline's explanatory models.

## 1.2 Modern Developments

With the rising need for international cooperation in politics, science and economics and the ensuing foundation of international organizations after WW II, language and cultural mediation in the form of translation and interpreting became an important international factor and modern translation research established itself as a discipline of its own. The attempt to simulate translation processes by machine translation in the fifties gave rise to important questions on the lexical and syntactical level of language transfer and subsequently positioned translation within the field of applied linguistics. When machine translation failed to produce the expected results, a 'human' translation science began to develop in the sixties relying on the categories and paradigms of general, applied and contrastive linguistics (Catford 1965, Wilss 1977, Koller 1979) and the authors of the so-called 'Leipzig school' (Kade 1968, Jäger 1975, Neubert 1968) and – with a communicative orientation – also Nida (1964)). In opposition to this 'linguistic' orientation a literature-based historico-descriptive paradigm developed, represented by the works of Klopfer (1967), Kelly (1979), and the 'Göttinger Sonderforschungsbereich' (e.g. Kittel 1988).

Rejecting both paradigms as too philology-oriented, a functional translation school developed in the eighties placing the *skopos* of a translation in the center of attention (Reiss & Vermeer 1984, Holz-Mänttari 1984, Nord 1988, Snell-Hornby 1988). While this school made a major contribution towards establishing translation science as a discipline of its own, it still needs to clarify its concepts and methodologies and is today primarily accepted by translation practitioners as relevant for pragmatic texts. As a result of its heterogeneous historical development and its deep roots in practice, translation theory and research today presents itself as highly fragmented and compartmentalized.

## 1.3 Today's Challenges

As a practical phenomenon, translation & interpreting is a key global activity today and sets the stage for cross-cultural knowledge transfer and intercultural communication. It is of particular urgency in the world's largest and most prestigious employer of translators and interpreters, the European Union where translation and interpreting services have increased from 110 language combinations before enlargement on May 1<sup>st</sup>, 2004 to 462 language combinations.. As was highlighted by the 2004 SCIC (*Service Commun Interprétation Conférences*) Universities Conference, the boundaries between translation, interpreting and multilingual communication are becoming increasingly blurred and multidimensional language competencies (including technology and (project) management skills) are required to meet modern multilingual communication challenges in an enlarging Europe.

Against the background of a fragmented (research) profile with little cross-fertilization between its multiple dimensions of intralingual (LSP communication), interlingual translation (translation between national languages) and intersemiotic translation (e.g. audiovisual translation), new technologies have transformed one-dimensional translation tasks (spoken-to-spoken/written-to-written modes) into

multidimensional (i.e. multilingual, multimedia, multimodal and/or polysemiotic) communication scenarios.

Modern translation tasks typically cut across the interlingual, intralingual and polysemiotic categorizations, potentially involving knowledge management and text (e.g. terminology management and website localization), linear to non-linear (e.g. 'hypertext'), spoken to written (e.g. subtitling or written interpreting), auditory to visual (subtitling for the hard-of-hearing), visual to auditory (audiodescription for blind audiences), spoken to manual symbols (sign language interpreting). The challenges of modern (multimedia) technologies and their impacts on the form, content, structures and modes of modern translation are still not yet fully known although language technology & knowledge representation (e.g. Schubert 2003, Budin 2002, Dam/Engberg/Gerzymisch-Arbogast 2005), electronic textuality and multimodal translation scenarios are today intrinsically interrelated with such translation subfields as LSP communication and audiovisual translation.

What are the implications of this development for the discipline of translation in its theoretical and practical dimensions? Can the impact of globalization and new technologies on the form, content, structure and modes of a translated product be identified and systematized? Will it enhance theoretical consolidation and lead to a coherent translation research profile or will it continue to lead to compartmentalization and eventually disintegration of the discipline? Can we establish a common theoretical ground for translation as a discipline within which research progress will promote the discipline as a whole, in which theory and practice are mutually beneficial to each other?

## 2 Multidimensional Translation: Concept and Methodology

We approach these questions from a theoretical perspective with a view to translation practice and argue that despite its heterogeneous development translation theory has considerably honed its research profile in the past 20 years to the extent that with the concept of *multidimensional translation* there is indeed a common theoretical ground as a resource from which translation practice in all its dimensions can draw support and benefit in an effort to meet the challenges of modern translation tasks. *Multidimensional Translation* proceeds from the idea that there is unity in a common (theoretical) core in all translation (processes), no matter how complicated and varied the languages in question, their textual structures or the media by which they are transmitted may be. They all require

- source material, e.g. knowledge and text (in the widest sense),
- to be 'transferred' to
- another material, e.g. another knowledge (system) or text (in its widest sense)

irrespective of whether the translated product is in the same (national) language or not, written, spoken, or signed, in linear or non-linear form, technology-driven and multimedia-supported or not.

Beyond this conceptual common ground, the following common traits are suggested to apply to all human translation procedures, i.e. that

- texts need to be understood before they are translated (which requires world knowledge, individual understanding being secured by text analysis)
- translation implies a 'transfer' from one of at least two cultures, languages, modes and/or sign systems (in the widest sense) to another and that
- text production in the target culture, language, mode and/or sign system requires re-formulation according to a set of parameters to be specified in the individual scenario.

The research program portrayed in Section 3 proceeds from the idea that from this theoretical basis a common translation methodology can be developed.

## 2.1 Conceptual Foundations

Translation theory, which – following the ‘Leipzig School’ terminology - traditionally includes both forms (written translation and oral interpretation) defines its object in a stricter and wider sense with transfer being performed e.g. on ‘language’ (Jacobson 1959, Koller 1972), ‘texts’ (Catford 1965), ‘messages’ (Nida/Taber 1969) or ‘information offers’ (Reiß/Vermeer 1984).

Catford (1965:20)	„Translation may be defined as follows: the replacement of textual material in one language (SL) [source language] by equivalent textual material in another language (TL) [target language].“
Koller (1972:69)	„Linguistisch kann die Übersetzung als Umkodierung oder Substitution beschrieben werden: Elemente $a_1, a_2, a_3$ des Sprachinventars $L_1$ werden durch Elemente $b_1, b_2, b_3$ des Sprachinventars $L_2$ ersetzt.“
Jakobson (1959:233)	„1) Intralingual translation or <i>rewording</i> is an interpretation of verbal signs by means of other signs of the same language. 2) Interlingual translation or <i>translation proper</i> is an interpretation of verbal signs by means of some other language. 3) Intersemiotic translation or <i>transmutation</i> is an interpretation of verbal signs by means of signs of nonverbal sign systems.“
Nida & Taber (1974:12)	„Translating consists in reproducing in the receptor language the closest natural equivalent of the source-language message, first in terms of meaning and secondly in terms of style.“
Reiß & Vermeer (1991:119)	„Ein Translat ist ein Informationsangebot in einer Zielkultur und -sprache über ein Informationsangebot aus einer Ausgangskultur und -sprache.“

Fig. 1: Translation Concepts<sup>1</sup>

Despite the diversity in the objects of translatory action, all of these translation concepts involve a transfer as the differentia specifica of translation. Transfer can thus be considered the common core of any translatory action. If we keep the objects of translatory action relatively open, the following translation concept can accommodate a wide range of translation types from hypertext to subtitling:

Translation in its widest sense can be understood as

- a concern/interest of a speaker or writer which is expressed
- by means of a sign system 1
- formulated in a Medium 1 (= original)

and which is made understandable

- for a hearer or reader
- with a specific purpose
- by means of a sign system 2
- formulated in a medium 2 or in several media 3, 4, 5 (= translation)

<sup>1</sup> This overview is taken from Karger, Noemi (2005): Untertiteling – Übersetzung oder Bearbeitung. Universität des Saarlandes (unpublished)

Based on this general concept of translation, *Multidimensional Translation* can be defined as a form of translation which transfers – with a specific purpose – a speaker or hearer’s concern expressed in a sign system 1, formulated in a medium 1, via the same medium or a medium 2 or a combination of media into another sign or semiotic system 2.

Key components in this definition are that the concern needs to be expressed (as the basis of any translatory action), that the transfer is made with a specific purpose in mind and potentially involves a change of sign or semiotic system and/or mode or media. With this understanding of multidimensional translation it is possible to accommodate and describe a transfer from the spoken to the written (e.g. subtitling), from the written to the spoken (e.g. sight translation) from the visual to the spoken (e.g. audiodescription) and many other hybrid forms of translation and interpretation under the umbrella *multidimensional translation*. It is a research desideratum to describe the conditions and forms of the different types of multidimensional translation.

## 2.2 The Methodological Ground

If we proceed from the traditional three-phase translation model of analysis, transfer and restructuring (Nida/Taber 1969, 33) and adapt it for our purposes into partially interrelated reception, transfer and (re)production phases (Gerzymisch-Arbogast 2002, 26; 2003, 130 ff.; 2005, 36)<sup>2</sup>, certain methodological operations in all these three phases can be formulated in an abstract form that is applicable to all language combinations, all text types, and all translation modes.

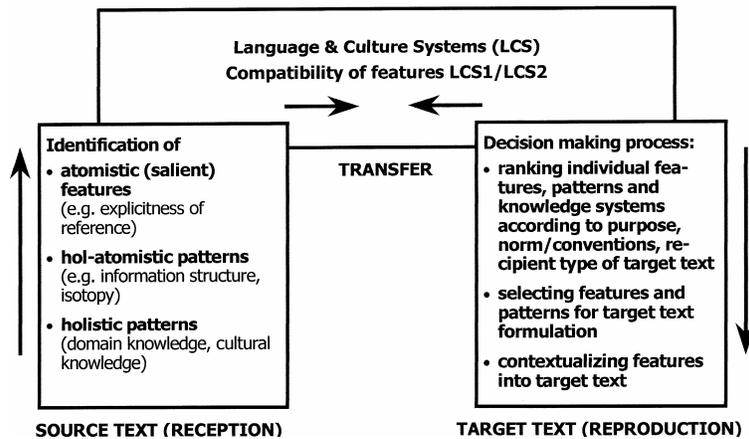


Fig. 2: Overlapping Translation Process Phases

<sup>2</sup> These principles have been formulated as a coherent step-by-step translation methodology in Gerzymisch-Arbogast/Mudersbach 1998 and are extensively exemplified (e.g. Gerzymisch-Arbogast 2002, 2005 a and b) They are therefore not repeated here.

They involve

- bottom-up text analysis with text-individual ‘salient’ features (identifiable on an atomistic, hol-atomistic and holistic level),
- comparative compatibility analysis during transfer on all three levels,
- intersubjective verifiability and weighted decision-making as guiding principles,
- potential variability with respect to purpose, norm, text type, recipient type and (transparent) translator’s preferences.

### **2.3 The Reception Phase: Text Analysis**

In contrast to most other existing translational text analysis methods, which proceed from an a priori established category roster and do not allow for the systematic description of ad hoc individual text features or idiosyncrasies (e.g. Nord 1988), it is suggested for multidimensional translation tasks – as a general principle – to analyze texts more flexibly in a bottom-up fashion according to their individual (‘salient’) features.<sup>3</sup> Bottom-up analyzable text features are identifiable as three different text perspectives (with different representations and potential visualizations), i.e. from an atomistic, hol-atomistic and holistic text perspective (cf. Gerzymisch-Arbogast/Mudersbach 1998, Gerzymisch-Arbogast 2002, 2005a and b).

### **2.4 The Transfer Phase: Comparative Compatibility Analysis**

Compatibility analysis verifies whether the (implied) text features (identified from an atomistic, holistic and hol-atomistic perspective in text analysis) are compatible with the target ‘material’ in content, form, structure and mode.<sup>4</sup>

The resulting (partial) incompatibilities will raise translation problems that need to be solved when re-formulating the target product (reproduction phase). They are today accessible in a systematized form mostly from an atomistic perspective (e.g. as lexical problems, cf. Koller’s 1:0 correspondence and the procedures for closing lexical gaps in translation). The MuTra project is designed to engage in further research into both hol-atomistic and holistic perspectives with a variety of text types and translation modes, placing particular emphasis on the holistic dimension of cultural constellations (Floros 2003) and knowledge management and information structures in LSP transfer (e.g. simultaneous interpreting as in Gerzymisch-Arbogast/Will (2005).

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<sup>3</sup> This, of course, does not mean that linguistic and/or other collective categories are not valid at all but does mean that text analysis should not be restricted to pre-established categories and needs to be flexible enough to accommodate singular text features too, e.g. typographical idiosyncrasies or innovative categories, e.g. speaker-hearer relationships.

<sup>4</sup> Examples of analyses are available on all these levels for a variety of text and translation types, the most comprehensive description of transfer modalities can be found in Floros’ dissertation on (cultural) constellations in texts and their translation (Floros 2003).

## 2.5 The (Re)Production Phase: Intersubjectivity and Weighted Decision-Making

With source text understanding (reception phase) and target culture compatibility (transfer phase) secured, the following principles are suggested to apply to all translatory action:

- Translation decisions cannot be made ‘objectively’, but they can be made transparent to others. The strongest research criterion ‘objectivity’ therefore needs to be replaced by ‘intersubjective transparency’ of translation decisions.
- Translation cannot reflect all features of the original. Only a selection of features (identified by text analysis) can be transferred to the target product. Translation therefore requires decision-making. Consistent decision-making – in contrast to intuitive ad hoc decisions - requires a ranking of features identified in text analysis with respect to the priority in which they are to be realized in the target product (weighted decision-making).
- Decisions in the reformulation process are at least governed by the parameters of ‘purpose’, ‘recipient type’ and ‘norms/conventions’ of the target product. Their interplay needs to be made transparent.

These principles allow for a translator’s individuality (subjectivity, creativity) but support him/her in making reasonable and consistent decisions. They also allow for individual variants in text formulation and account for the fact that a source text may have different target versions which may all be ‘correct’ but reflect different discursive modes, different purposes or simply different translators’ preferences.

On this basis, the discipline of translation can be considered to offer a coherent conceptual and methodological profile of *multidimensional translation*.

## 3 Multidimensional Translation: The MuTra Project

### 3.1 The Scientific Program

The MuTra research project addresses the multiple (multilingual, multimedia, multimodal and polysemiotic) dimensions of modern translation scenarios and raises questions as to the impact of new technologies on the form, content, structure and modes of translated products. It integrates research in cross-cultural knowledge management, LSP communication and audiovisual translation into translation theory with the objective of strengthening the research profile of translation.

The project’s objective is to 1) to draw attention to and promote research in the common ground or core translation components under the multiple conditions and constraints of multidimensional translation and interpreting, 2) to strengthen the research profiles of traditional concepts of translation and interpretation by providing qualitative research into various types of multidimensional translation, i.e. LSP communication or audiovisual translation, especially by research into the interplay of textual parameters such as coherence, information sequencing, isotopic continuity among others, 3) to apply coherent and consistent translation and interpreting methodologies to multidimensional translation and 4) to train young researchers in the respective research and training methods to enhance their professional and research competence as language and cultural experts and translators.

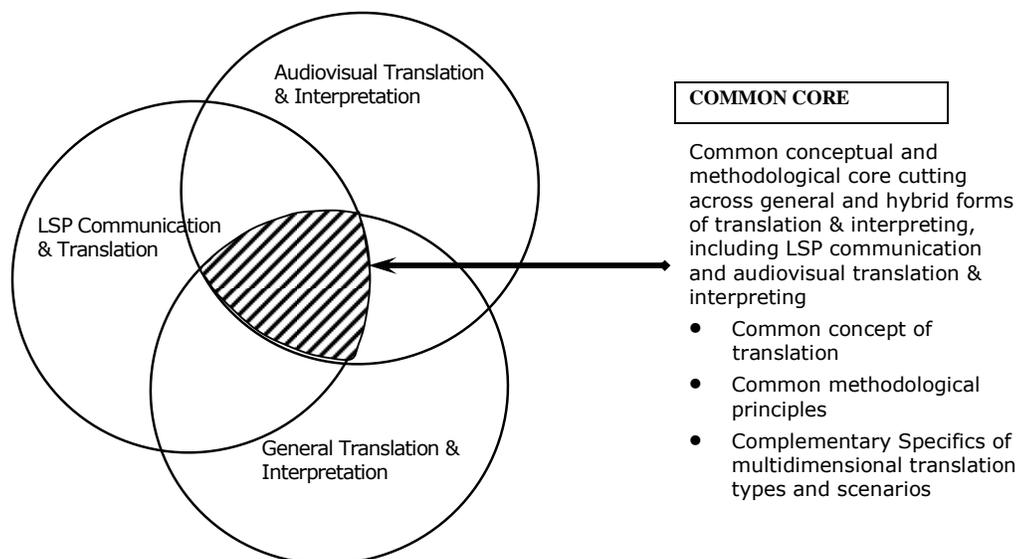


Fig 3: Common Core of MuTra

In the course of this research project, the *Advanced Translation Research Center (ATRC)* together with its partners in the scientific committee<sup>5</sup> organizes three large international Marie Curie high-level-scientific conferences for young and more experienced researchers in the field and one intensive PhD training course on *Multidimensional Translation* in Saarbrücken 2005, Copenhagen 2006 and Vienna 2007 (for details cf. [www.euroconferences.info](http://www.euroconferences.info)).

The conference contributions will be published as conference proceedings under [www.euroconferences.info](http://www.euroconferences.info) (Proceedings). Contributions which address the above-mentioned research profile in concept and/or methodology will be published as a consolidated volume by TC Publishing online ([www.translationconcepts.org](http://www.translationconcepts.org)) and in book form at the end of the conferences series in 2007.

The conference series is coherent in that all events 1) discuss multidimensional translation as a theoretical framework for modern hybrid translation and interpretation tasks, 2) complement each other in that each applies the common core theoretical and methodological framework to different types of multidimensional translation, i.e. multidimensional translation theory as a challenge (Event A, Saarbrücken, with PhD training activity Event D), audiovisual translation scenarios (Event B, Copenhagen with integrated PhD tutorial) and LSP translation scenarios (Event C, Vienna with integrated Ph tutorial).

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<sup>5</sup> The partners of the project under the leadership of the ATRC (Prof. Dr. Heidrun Gerzymisch-Arbogast) are (in alphabetical order) Prof. Dr. Gerhard Budin/University of Vienna, Prof. Dr. Jan Engberg/The Aarhus Business School and Prof. Dr. Klaus Schubert/University of Applied Sciences, Flensburg, Prof. Dr. Valda Rudziša/University of Ventspils, Prof. Dr. Henrik Gottlieb/University of Copenhagen, Prof. Dr. Kristina Szabari/University of Budapest. These partners are supported intersectorially in the area of subtitling (Mary Carroll, owner of Titelbild GmbH, Berlin) and project management (Jörg Scherer, owner of Eurice GmbH, Saarbrücken).

### **3.2 Research Areas and Perspectives**

The coherent conceptual and methodological framework of the MuTra project will open up new research by:

- establishing technological support for bottom-up salient features' text analyses on an atomistic, hol-atomistic and holistic level to facilitate processes in the reception phase (cf. above);
- conceptualizing and implementing knowledge/cultural data banks for facilitating comparative analyses in the transfer phases (cf. above);
- integrating multimedia and technological support description and influences into translation decision-making processes in the reproduction phase (cf. above) of multidimensional translation scenarios, e.g. securing consistency and transparency of decision-making with a given translational purpose and including multimedia visualizations for depicting and illustrating the interplay of interrelated textual parameters (e.g. coherence, information sequencing, isotopies) with computer assistance
- providing young researchers with systematic methodological training in translation decision-making processes and its application to a wide range of (hybrid) text and translation types and scenarios (general-pragmatic, LSP and audiovisual translation scenarios)
- integrating the results of the present project into current academic curricula developments (e.g. university courses in audiovisual translation, audiodescription, LSP communication etc.)
- complementing other research initiatives in the field of multidimensional translation.

New horizons for research include the following areas:

- all traditional translation and interpreting scenarios that are media-supported, including
  - Spoken – Transfer to – Spoken  
(generally all kinds of traditional interpreting with the exception of sight translation and note-triggered consecutive interpreting)
  - Written – Transfer to – Written  
(generally all kinds of written intralingual und interlingual translation)
  - Spoken (plus additional media requirement/support) – Transfer to - Spoken (plus additional media requirement/support)  
(e.g. synchronization, voice over, live subtitling, media interpreting)
  - Written (plus additional media requirement/support) – Transfer to – Written (plus additional media requirement/support)  
(e.g.(Website)-Localization, Hypertext-Translation, Script Translation).
- all translation and interpreting scenarios which involve a change in the mode of presentation (e.g. written to oral or vice versa as in sight translation or subtitling), including
  - Written – Transfer to – Spoken  
(e.g. free commentary, theater translations, sight translation)
  - Spoken – Transfer to – Written  
(e.g. subtitling, written interpretation)
- all translation and interpreting dimensions that involve a change in the sign system (e.g.. visual to oral as in audio-description or spoken to signs as in sign language interpreting)

- Spoken – Transfer to – Visual/Symbols  
(e.g. note-driven consecutive interpreting, sign-language interpreting)
- Visual/Symbols – Transfer to – Spoken  
(e.g. consecutive interpreting as verbalizing notational text symbols, audiodescription)
- Visual/Symbols – Transfer to – Written  
(e.g. written sign language, transforming pictures/imagines into text, translation of comics, video game localizations)
- Written – Transfer – Visual/Symbols  
(visualizations of text<sup>6</sup>, pictograms, Braille)
- Visual/Symbols – Transfer to – Visual/Symbols  
(international (electronic) advertising, infotainment)<sup>7</sup>

Specifically, the following sample research questions – among others – lend themselves for being addressed and empirically investigated:

- Are the reduction strategies developed in simultaneous interpretation valid instruments when it comes to text condensation requirements in subtitling (for the hard of hearing) and written interpretation? How do the two dimensions differ in coherence-establishing processes in terms of a priority for local and/or global coherence?
- Do the expansion strategies developed in consecutive interpretation lend themselves for application in audiodescription?
- In what way and to what an extent can the narrative techniques of literary translation be of value to audiodescription techniques?
- In what way could localization procedures profit from theories of translating culture (e.g. cultural constellations, cf. Floros 2003) and can such theories contribute to systematizing such complex tasks as the translation of rap or comics?
- How can the transparency of the interplay of auditive and visual information in a concrete situation lead to modified coherence concepts for audiovisual translation?
- How can coherence be established in non-linear hypertext document translations? And can systematic coherence establishing strategies and condensation principles in turn lead to the development of new strategies in simultaneous interpretation?
- Can authentic complex dialog situations configuring intended thematic leaps & gaps or non sequitur phenomena of cross-purpose talks, parallel speech sequences, abrupt turns in conversation lead to new and finer types of information structuring categories?
- How can the problem of connotative and emotional transfer be tackled in subtitling for the hard-of-hearing, for language acquisition purposes or in sign language interpreting?<sup>8</sup>
- Can the iconicity of representing events in sign language interpreting lead to systematized syntax and information structuring designs for (sign) language interpretation and mediation?

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<sup>6</sup> cf. the recent works of Anneli Rothkegel (2003, 2004a and b)

<sup>7</sup> cf. Minako O'Hagan 2007

<sup>8</sup> cf. Neves 2005 and forthcoming.

## 4 Concluding Remarks

These are but few of the multitude of research questions that multidimensional translation research opens up in the future. In addition, many new horizons open up in hybrid translation forms such as the translation of music (Kunold forthcoming) or the transfer of visual information into tactile information (Wagner 2007)<sup>9</sup> or such complex transfer forms as theater translation (Griesel 2000, forthcoming), where a holistic approach is needed to integrate elements of respeaking and subtitling, simultaneous interpretation, and condensed translations.

Considering these manifold dimensions, the question of course arises as to the edges and limits of the multidimensional translation concept. Could the choreography of Thomas Mann's *Death in Venice*, danced to elements of music by Bach and Wagner as John Neumeier produces it so beautifully on stage be researched in its complexity under the umbrella of multidimensional translation? Can the transfer of visual information to tactile information be researched for its invariant components on the basis of a wider translation concept and based on transparency-driven methodological standards? These questions certainly need further reflection and exploration and open up a completely new paradigm for a transfer science with powerful implications and a wide spectrum for further research opportunities for the next generation. As Antoine de Saint-Exupéry put it so aptly: "To grasp the meaning of the world of today we use the language created to express the world of yesterday. The life of the past seems to us nearer to our true natures, but only for the reason that it is nearer to our language" (Motto of the Leopoldo Costa Prize award, SCIC Universities conferences, 2006).

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<sup>9</sup> Mathias Wagner received the VISU prize of Saarland University in 2004 for his research on this topic, cf. also Wagner 2007.

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## Back to the Future in Subtitling

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- 2 DVD is here to stay
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### Abstract

Audiovisual translation (AVT) in general, and in subtitling in particular, has an umbilical relationship with technology, which to a large degree determines it. The technical advances taking place in this area can have an immediate and considerable impact both on the subtitling practice from the practitioner's perspective, and also on the perception of subtitling we have as spectators and consumers. This article proposes to investigate how some of the technological changes that have recently taken place in this field are affecting this translating mode. Focusing on interlingual subtitling in a variety of language combinations, I take a look at the different conventions that have started to crop up in commercialised DVD subtitled programs and that diverge acutely from what up until now has been considered standard practice in interlingual subtitling.

## 1 The technological revolution

Without any doubt, the most significant development to have radically affected the essence of this profession has been the possibility of digitizing the image. The shift from analog to digital technology has had a great impact upon work practices; e.g. in the design of specific software for subtitling; in the solid establishment of DVD in our society; in a greater dynamism in the traffic of audiovisual material, especially through the Internet; in the way in which we as spectators consume audiovisual programs; in the ease with which material can be accessed for research, and in the appearance of new types of subtitling. It is no exaggeration to claim that digital technology is altering our perception of the audiovisual world and our relationship to it.

One of the most striking factors is the surprising speed with which these changes have taken place. The subtitling praxis has undergone an important transformation in a relatively short period of time, with all the associated advantages and inconveniences. What was habitual practice ten or fifteen years ago in the spotting and simulation of subtitles has now become history. And what is today considered innovative and advanced might soon cease to be so.

The computer has been one of the advances to have greatly changed the world of translation in general; and it could be argued that in the field of subtitling the impact has been even greater, with the launch of many computer programs designed exclusively for subtitling work. The first subtitling equipment was marketed in the second half of the nineteen-seventies and, over time, has been perfected until arriving at the generations that are available today. Subtitling programs that a few years ago required a computer, as well as a video player and an

external television monitor in order to undertake all the necessary stages of the work, are today obsolete. Unless working with templates (i.e. files containing master English subtitles to be translated into other languages), subtitlers these days usually require a computer, a subtitling program, and a digitized copy of the audiovisual program to be subtitled. This equipment allows them to spot the dialog exchanges in the original, do the translation, use a spell checker, synchronize their own subtitles with the image on the screen and simulate what will be the final copy.

One of the most serious obstacles for the subtitler has traditionally been the prohibitive price of these subtitling programs, which has also had an adverse effect on the teaching of this discipline, as many universities and educational institutions find themselves unable to invest large sums of money in computer equipment which require a high level of technical attention and which evolve at a dizzying speed. For the translator working only sporadically in this area, or for those who receive templates in English with the spotting already done by the subtitling company, the complete set of subtitling equipment is perhaps unnecessary.

A practice that is gaining ground consists of offering to the freelance subtitler a version of the subtitling program which, while not offering the full functionality of the program, is sufficient for the professional to undertake many of the tasks involved in subtitling. Because they have fewer functions, these freelancer versions are easier to use. On the one hand, they require less technical preparation on the part of the translators, and on the other they minimize the risk of the subtitler getting lost in the handling of programs which may be complicated.

The functionality of these programs is being constantly revised with a view to maximize the subtitlers' productivity and, as a result, reduce the cost of the work. Some programs incorporate a function that shows changes in soundtrack volume and so helps to speed the spotting of the original dialog. Shot changes can also be automatically detected these days and voice recognition is another area in which much work is being done, having already borne some fruit in the preparation of live subtitles for the deaf and the hard-of-hearing. In the toolbox of machine assisted translation, automatic translation undertaken within the context of subtitling has for years been an incipient reality in the USA. Although still far from being entirely satisfactory, with examples like *Mr. Bush* becoming literally *el señor Arbusto* in Spanish, these attempts are aimed at meeting certain social needs. The USA has a long history of subtitling for the deaf and the hard-of-hearing, manifested in high percentages of intralingually subtitled audiovisual programs – i.e. from English to English – for these social groups. Through an automatic translation program, the company Global Translation, Inc. offers an automatic translation service in Spanish ([www.translatetv.com](http://www.translatetv.com)).

Mention has to be made of the development in translation memory tools which store previously translated sentences and allow the user to recall them as a base for a new translation. Based on computational linguistic analysis at an advanced level, these tools have had a very important impact on translation practice, although their value in the case of AVT is questionable and still to be researched. At present, they appear to be more effective for working with documents characterized by a high level of lexical repetition. It is clear that the application of corpus studies to translation is an avenue of research that has yielded fruit in other areas of translation such as technical and specialized translation, but which still appears not to have made its entry into the field of AVT.

Technology and computers have had a direct impact upon the subtitling praxis and have made life easier for all those working in the world of subtitling. But it is also true that they have changed the work profile expected of subtitlers. Linguistic competence and socio-cultural and subject knowledge are no longer sufficient in order to be able to operate effectively in this profession. A reasonably high technical knowledge, as well as an ability to quickly familiarize with new programs and specifications is now expected of subtitlers. Subtitlers have to be conversant with the information and communication technologies.

## 2 DVD is here to stay

The arrival of DVD can be considered the most significant advance in our field. It is having the greatest impact in the way audiovisual programs are sold and marketed, and it has changed subtitling as a translation practice. Since bursting onto the market, its rise has been unstoppable: “DVD became the most successful consumer electronics product of all time in less than three years of its introduction. In 2003, six years after introduction, there were over 250 million DVD playback devices worldwide” (DVD Demystified, 2004).

The DVD is a versatile disc on which audio and video material as well as all types of electronic documents can be recorded and reproduced. It is a new generation of optical disc that, although very similar to the CD, is essentially faster and has a greater memory capacity, a potential recognized by the audiovisual industry. Perhaps its most significant advantage is the possibility of incorporating up to 8 versions of the same program dubbed into different languages, and up to 32 subtitle tracks in several other languages.

Its large memory capacity makes it possible to offer material on the same DVD that a few years ago was not marketed at all, or done only very occasionally on some VHS tapes. Today, however, practically all DVDs contain, in addition to the film, extra material, including selected filmographies and biographies of the main actors; inter-active menus in different languages, a selection of photographs, interviews with the director, actors or heads of the production and special effects teams, copies of the trailers used for publicity etc. Sometimes the duration of this bonus material is longer than the film itself and, having been recorded in a different language, requires translating. Neither dubbing nor voice-over are normally used for the translation of this material. Subtitles are usually the preferred approach, which has meant a considerable increase in the volume of subtitling work in the past few years (cf. Gottlieb 2007).

The superior technical virtues of DVD, compared with VHS tape, together with the commercial interests of certain companies, have contributed to a change in the habits of viewers who have, on the whole, embraced DVD and rejected VHS. The impact upon the AVT profession, and particularly subtitling, has been intense since old films that had previously been distributed on VHS have had to be transferred into the new DVD medium. But it is not only old films that have taken advantage of this situation. Television series that are normally broadcast dubbed on Spanish, Italian, German or French television (*Ally McBeal*, *Friends*, *Sex and the City* or *The Simpsons*, to give just a few examples), are later sold on DVD in both dubbed and subtitled versions. The same thing happens with some of the most recent films. They are launched in the cinema dubbed, but are later marketed also with subtitles on DVD. It is no longer only art films that are subtitled but also the major studios’ releases since the production of subtitled versions requires a relatively small investment. Traditional dubbing countries such as Spain, France, Germany or Italy, where subtitling has been historically marginal, have now awoken to the reality that most of the film releases and television programs are both dubbed and subtitled, for their distribution on DVD. The inverse situation – i.e. dubbing for DVD of films that were originally marketed only with subtitles – has also occurred, though to a lesser extent given that it is a far more expensive activity. Examples are the dubbing into English of films like *Women on the Verge of a Nervous Breakdown*, *Life is Beautiful*, *Crouching Tiger*, *Hidden Dragon* and *Betty Blue*.

The possibility of incorporating up to 32 subtitling tracks on one DVD has given rise to new realities in AVT. Traditionally, a distinction has been made, *grosso modo*, between two types of subtitling. The *interlingual*, implying the translation of a source language into a target language, and the *intralingual*, also known in American English as *captioning*, in which there is no change of language: Spanish dialog is subtitled in Spanish. On television, these subtitles are transmitted as an independent signal which is activated by accessing a teletext page – 888 in the UK for instance – and their social function is to meet the needs of the deaf

and the hard-of-hearing in order to assure greater access to audiovisual programming. This is achieved by changing the actors' dialog into written speech which also incorporates, among other things, all the paratextual information that contributes to the development of the plot or the creation of atmosphere that the deaf are unable to access through the soundtrack, e.g. a telephone ringing, the knock on a door or a car revving. This type of subtitling, known as subtitling for the deaf and the hard-of-hearing (SDH), has been made more widespread thanks to DVD, and it has undergone a spectacular growth in some languages, notably English<sup>1</sup>. However, this taxonomy has systematically ignored a professional practice that has already existed for several years and is acquiring, thanks to DVD, greater visibility: interlingual subtitles for the deaf and the hard-of-hearing.

Historically, the members of these communities in countries with a dubbing tradition, such as Spain, Germany, France or Italy, could only see programs that had been originally produced in Spanish, German, French or Italian and subsequently subtitled into their respective languages. Given that the translating custom of these four countries has been to dub the vast majority of their foreign programming, the deaf and the hard-of-hearing have had difficulty in accessing the information contained in these programs. In other nations with more of a tradition in subtitling, such as Portugal, Greece and the Scandinavian countries, the deaf have normally been served by the same interlingual subtitles as the hearing, even when these are evidently inappropriate to their needs.

With the arrival of DVD the situation has changed and is continuing to change. On the one hand, a growing number of films in a growing number of languages are being distributed with an intralingual subtitled track. On the other, pressure groups in countries such as Germany, the UK and Italy have managed to get many foreign films marketed in their countries with two different interlingual subtitle tracks: one for the hearing and one which takes into account the needs of the deaf. Thus, American films such as *Thelma & Louise* or *Annie Hall* incorporate two subtitle tracks in German – one for the hearers and one SDH. Similarly, Spanish films like *Women on the Verge of a Nervous Breakdown* are marketed on DVD with two interlingual subtitle tracks in English and a further two in German. Unfortunately, other languages such as Spanish, French or Portuguese lag behind in these new developments and at present it does not appear to be a practice which is undertaken. It is only through pressure groups demanding changes in this area that social advances directed towards facilitating access to the media for all can be achieved.

### 3 Low quality?

For a long time now there has been a growing concern among many professionals about the relatively low levels of quality that can be found in some subtitled programs. Although it is clear that subjectivity can play a big role in identifying what is wrong or of low quality in subtitling, it is in my opinion undeniable that quality standards in subtitling have seen a sharp decline in recent years. The reasons for this development are manifold.

The hike in the demand for subtitled programs has brought about a mushrooming of companies working in AVT, and more particularly in subtitling, which might not have the necessary expertise when dealing with this type of translation. Some of these companies are new players in the field, whilst some others have a solid background in AVT although in related areas, such as intralingual SDH. Poor working conditions are also to blame for this

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<sup>1</sup> This is probably the most rapidly growing AVT type today, greatly due to the success of pressure groups lobbying on behalf of this section of the audience. Their fight has borne fruit in the passing of legislation in many Western countries making it compulsory for television stations to broadcast a certain percentage of their programs with SDH. For the most comprehensive account on SDH to date see Neves (2005).

decline. Ever lower pay rates for translators, more and more precarious freelancing, little training for newcomers, absence of proper in-house guidelines, little time for doing enough research and impossible deadlines do little to boost the morale of translators and to stimulate a positive working ethos. We cannot forget that subtitling is the result of a team effort and the decline in standards must not be blamed solely on the figure of the translator. Some of the most noticeable pitfalls occur at the technical level: inappropriate spotting of original dialog, unfortunate choice of font, low legibility, awkward presentation on screen etc. A less slack attitude on the part of some technicians will undoubtedly contribute to better standards.

It can also be argued that the absence – be it at local, national or international level – of a consensus in regard to quality in interlingual subtitling, or of a body responsible for ensuring the application of a minimum standard of quality, has favored this situation. The attempts made by Ivarsson and Carroll (1998: 157-159) to propose a code of good subtitling practice stemming from proposals put forward by the European Association for Studies in Screen Translation ([www.esist.org](http://www.esist.org)) have not borne the fruit for which many hoped.

Although some of the solutions reached in the examples that I analyze below can be unequivocally considered instances of poor quality, it is not my intention in these pages to enter a debate about a possible decline in standards. Rather, I intend to offer a descriptive account of some of the new ways in which subtitles are being presented nowadays on some of our screens. My interest lies primarily in the form and layout, and not so much in the content and the linguistic transfer that has taken place. All the examples used here are authentic and come from audiovisual programs currently on sale.

## 4 New conventions in interlingual subtitling

### 4.1 Dialogue techniques

When indicating to the viewer that the subtitle on screen is showing what two characters are saying, one of the most deeply entrenched subtitling conventions has been to show each of the enunciates on a separate line. Thus, the first line, which may or may not be preceded by a dash, is reserved for the first character who speaks and the second, which is always preceded by a dash, for the second speaker. The two following subtitles are common in the profession:

-Does anybody want a drink? -Yes.
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Does anybody want a drink? -Yes.
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However, this practice is starting to be questioned in two different ways. In what is clearly an attempt to make a more rational use of the space available for the subtitle, the first of these new approaches ignores the traditional line break of the subtitle, which gives a line to each of the two speakers. When two actors are speaking in the same subtitle, the segmentation that is now proposed is based on criteria more concerned with lexical density than with aesthetics or tradition. The priority is to include as much information as possible in the subtitle, and, in order to do that, the dialog uttered by the second speaker immediately follows the first speaker, starting in the very same line, as can be seen in Fig. 1:



Fig. 1: Stargate

Another convention that is being subverted refers to the number of speakers that we can encounter in the same subtitle. Once more, tradition has dictated that a maximum of two actors and two turn-takings can share the same subtitle (one per line). A new subtitle needs to be cued in when a third speaker, or speech turn, is to be translated. Following a pattern similar to the one seen in the above example, we also find instances (Fig. 2) in which three turn-takings are fit into one subtitle in order to make the most of the space and time limitations:

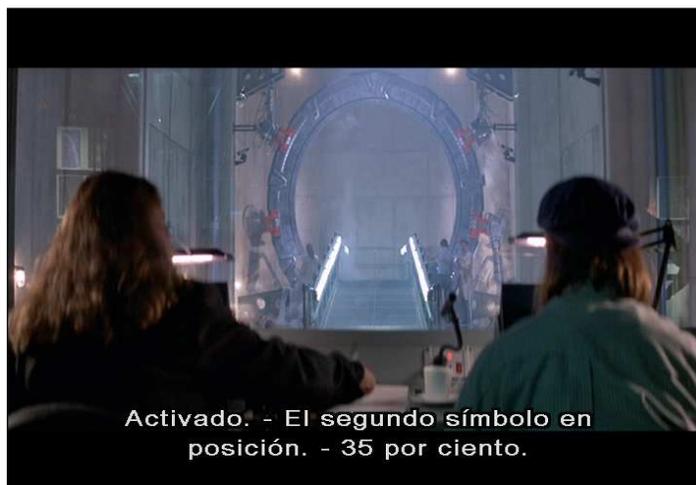


Fig. 2: Stargate

## 4.2 Number of lines

One of the most consistent and recurrent criticisms against subtitles has been directed towards the fact that they pollute the photography and distract our attention from what is going on in the image. For some, this ancillary device distorts the artistic work of the director of photography as well as the narrative work of the filmmaker, as it is superimposed on the original images. They are text added *a posteriori* and were never intended to be an integral part of the artwork. They are not an artistic creation but a necessary evil that we have to cope with in order to gain access to programs in other languages. It is for this reason that

traditionally, and rather arbitrarily, only two lines of subtitles have been used in interlingual subtitling as opposed to other modes, such as SDH, which count on subtitles of three and even four lines<sup>2</sup>. The two lines are normally placed at the bottom of the screen so as to interfere as little as possible with the image. In fact, as can be seen for instance in Figures 2 and 5, the format of the film is sometimes taken advantage of to place the subtitles, or at least one of the two lines, beneath the actual image. It is therefore surprising, to say the least, that some films are marketed with a lot of space between the two subtitle lines, which unnecessarily occupy and contaminate a substantial part of the screen, as in the example in Fig. 3:



Fig. 3: *Night of the Living Dead*

But this most generalized convention of having a maximum of two lines is also being challenged, and three-liners are starting to crop up in some films. The reasons behind this approach are not self evident and it is difficult to justify a presentation like the one in Fig. 4 where exactly the same information could easily be redistributed in two lines:



Fig. 4: *Dune*

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<sup>2</sup> Although the convention to resort to a maximum of two lines has prevailed in most countries, in some like Turkey the use of three lines is relatively common. Four lines are also frequent in places where bilingual subtitling is done, such as in Finland and Belgium, where in some cases two lines are for the Finnish/French translation and the other two lines for the translation in Swedish/Flemish.

### 4.3 Use of colors

One of the main differences between interlingual and intralingual subtitles has been their different approach to the use of colors. In this respect, SDH has always been more chromatically rich than subtitling for hearers. Teletext subtitling permits the use of up to seven different colors for text, although not all of them are satisfactory for subtitling due to their poor legibility on screen. Colors are used to help speaker identification and to inform deaf viewers about sound effects and particular tones of voice to which they do not have access auditorily. Given that hearing viewers can retrieve all these details effortlessly from the original soundtrack, the use of colors has been deemed to be irrelevant in interlingual subtitling, in which historically just one color has been used throughout the entire program: white or yellow.

Once again, we can purchase programs and films that resort to an unprecedented use of colors in our field. In the English subtitles of some Japanese films this departure from traditional conventions is expressed in the use of a palette of four different colors throughout the same film. Their choice of colors to relay information does not seem to be very systematic, perhaps due to the fact that this approach is very innovative and is still not settled in the profession. The following figures illustrate situations when colors are used<sup>3</sup>:

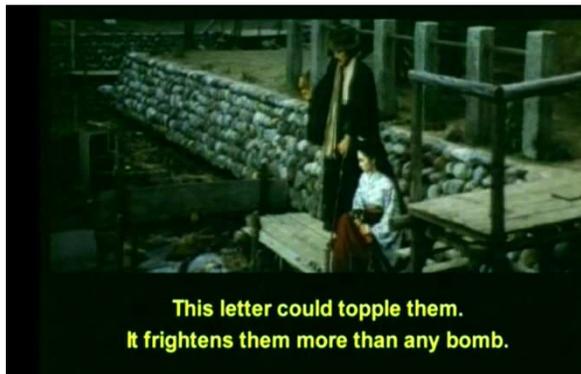


Fig. 5: *Lady Snowblood. Love Song of Vengeance*  
(both lines are in yellow)



Fig. 6: *Baby Cart in the Land of Demons*  
(top line in yellow, bottom line in green)



Fig. 7: *Zatoichi's Pilgrimage*  
(top line in yellow, bottom line in blue)



Fig. 8: *Baby Cart in the Land of Demons*  
(top line in yellow, bottom line in green/ red)

<sup>3</sup> Most of the stills in this paper are also available, in color, on:  
[www.euroconferences.info/proceedings/2005\\_Proceedings/Diaz%20Cintas\\_Jorge.pdf](http://www.euroconferences.info/proceedings/2005_Proceedings/Diaz%20Cintas_Jorge.pdf).

Yellow is the main color for the translation of dialog. It is the only color used when the subtitle, be it a one-liner or a two-liner, renders the translation of one actor's speech (Fig. 5). When the subtitle incorporates two speakers (Figures 6 and 7), the first line is always in yellow, whereas the character in the second line appears in some films in green (Fig. 6) and in some other films in cyan or blue (Fig. 7). Green is also used in some movies to indicate that the voices that we hear are off-screen and to translate the content of songs, instances that normally call for italics. The unorthodox convention of accommodating three speakers in the very same subtitle is also implemented in these films, and to identify them yellow, green and red are assigned to the first, second and third actors respectively, as seen in Fig. 8.

The other color that is regularly used is white. Fig. 9 below shows us one of its multiple usages, which is to translate the opening and closing credits of a film.



Fig. 9: *Baby Cart in the Land of Demons*

This arguably over-zealous attitude on the part of the distribution company to offer a full and detailed account of this type of information, usually overlooked in other subtitled programs, could be explained by the fact that the original language on the screen does not have the currency of other languages like English. It can be easily assumed that Western audiences will not be familiar with the Japanese alphabets, Kanji in this instance, and will need a full translation to avoid deception. They cannot know whether these are the opening credits of the film, or whether they are a forward, setting the context in which the rest of the plot fits.

What is also unusual in this example, and more interesting from the presentation point of view, is the way the spotting has been done. Rather than having two subtitles of two lines projected one after the other, they have preferred to offer two two-liners at the same time: one at the top and the other at the bottom of the screen. It goes without saying that this approach loads the reading effort of the viewer and contributes to create a somewhat overpowering feeling, with too much writing packed in on the screen. In an apparent attempt to fit all the information of the original into the subtitles, the order in which the credits are presented in English does not follow the Japanese. The details about lighting, that in Kanji characters appear in the second line, have moved to the end of the bottom line in the English subtitle. Despite this juggling of information, the technician has been unable to avoid the rather abrupt line break that takes place from the third to the fourth line.

One way to evaluate this new practice is to consider that colors call undue attention to the subtitles and detract from the photography. They do not seem to add any new information in interlingual subtitling, as opposed to SDH, and although innovative, they are rather unnecessary. The other side of the coin will be to argue that they try to guide the viewer with an unfamiliar language like Japanese, which is not as well known and widespread as English. Colors, in some instances, could help viewers to identify speakers.

This chromatic revolution in DVD subtitles for hearers contrasts sharply with the evolution encountered in SDH that has, paradoxically, gone in the opposite direction. From using colors on teletext, it has moved to being monochromatic – usually white – when distributed on DVD.

#### **4.4 Cumulative subtitles**

According to tradition, as mentioned previously, when two speakers appear in the same subtitle, each one is allocated a line and both appear at the same time on the screen. SDH also makes sporadic use of what is known as the overlay technique (Baker *et al.* 1984: 20-21) or cumulative subtitles (BBC 1998: 9) to allow two – exceptionally three – turns appearing in the same subtitle but not at the very same time. The second part of the text appears in synch with the second speaker and is added to the first part, while this first utterance remains on screen. All parts leave the screen at the same time. This technique is applied when delaying part of the information is important for dramatic considerations, such as keeping punch lines separate, or to follow the rhythm of a song. As in SDH, interlingual subtitling is also resorting to this strategy, as can be seen in Figures 10 and 11:



Fig. 10: *Baby Cart in the Land of Demons*



Fig. 11: *Baby Cart in the Land of Demons*  
(top line in yellow, bottom line in green)

One of the golden rules in interlingual subtitling is that the in and out cueing of a subtitle should coincide with the beginning and the end of the corresponding speech segment. To display simultaneously the speech of two different actors goes clearly against this rule, since the second actor's sentence will always appear on screen irremediably before it having been uttered. From a technical point of view, cumulative subtitles would seem to be the obvious solution to this dilemma as they have the advantage of respecting the synch recommendation.

However, in the professional practice the overlay technique is rarely implemented and subtitlers are discouraged from resorting to it because it tends to cause some perceptual confusion when read (Baker *et al.* 1988: 21). Despite this proviso, rather than disappearing, it seems to be spreading to the world of interlingual subtitling.

#### 4.5 Metatextual information

The space and time limitations to which subtitling is subjected have frequently been invoked to foreground its specificity as a translation mode, and to explain why subtitlers cannot resort to metalinguistic devices such as footnotes, prologues or afterwords in order to justify their solutions. Even if they have fully understood the punning in the original or the obscure cultural reference, if the constraints imposed by the medium are too stringent, they cannot pass on their knowledge to the viewers or justify their personal approach to the translation. In an earlier publication (Díaz Cintas 2003: 46), I stated that: "As things stand presently, the subtitler has to accept the impossibility of resorting to the metatextual note as an aid to his work", while at the same time I offered a ray of hope by speculating that "the hint of an improvement can be seen with DVD, as this format can incorporate metafilmic information about the making of the film or about the actors and, with goodwill, perhaps a general note by the translator might also be included" (my translation).

The large memory capacity of DVD means that this highly attractive possibility could become reality. From the technical point of view, there is no obstacle to the incorporation of more precise information on the translation as part of the bonus material. It can be argued that these sections will not be those most watched by viewers, but it is clear that the profile of the DVD consumer is heterogeneous and it seems reasonable to claim that there will always be people, such as film theorists, AVT translators and film enthusiasts who are interested in material of this kind. In areas like literature, drama and poetry, translation of the same text

takes on different manifestations. Literary works aimed at the philological scholar may be translated with many footnotes, whereas they will be eliminated when the readership is expected to be broader. Parallel texts with lots of notes may be a blessing for the language learner, but a nuisance for the general reader. A play can be differently translated depending on whether it will be performed or simply read. And poetry can be translated in verse or prose depending, once again, on the profile of the intended readership. In the same way, and to satisfy the needs of different viewers, there could be several approaches to subtitling. In fact, it might be said that we are slowly moving in that direction.

Today, we can already find films on the market that contain extra material centered on the translation process. One example is *Shrek*. The DVD of this film includes the documentary International Dubbing Featurette, which offers information on the dubbing of the film in more than twenty countries, with specific references to Italy, Spain, Germany, Mexico, France and Brazil. It also contains a section called ReVoice Studio, which attempts to bring the techniques of dubbing to the viewer in a playful way. Addressing the viewer, the DVD claims that you can “[r]ecord your voice over your favorite character’s dialog lines and star in entire scenes of the movie. You can be the voice of Donkey, Shrek, Fiona, Lord Farquaad or a fairy tale creature in one of 12 hilarious and fun scenes!”. Although this approach to the subject can be considered somewhat frivolous and anecdotal in that it does not focus on specific problems of translation, it helps to raise a certain degree of awareness about the whole translation issue and opens new possibilities of talking and reflecting about translation that were unthinkable until very recently. Kayahara (2005: 68) also cites the example of the Japanese film *Princess Mononoke*, released on DVD in North America with a brief interview with the translator of the film into English.

The interference and presence of the translator through metatextual interventions in the film itself, be it in the form of footnotes or glosses, has always been out of the question in our field. SDH has always resorted to the use of labels in order to convey information that would otherwise elude the deaf and hard-of-hearing viewer. In interlingual subtitling, the imperative of having to synchronize original dialog and subtitles, the need to stay within a maximum of two lines per subtitle, and the widespread belief that the best subtitles are the ones that are not noticed, seem to confirm the idea that it is actually impossible to add any extra information alongside the translation. Once again, subtitling for DVD appears to be breaking old taboos and offering a wide range of new opportunities.

These are undoubtedly some of the most interesting and daring examples mentioned up to this point, which can be found not only in these films but also in many others belonging to the same genre. In Fig. 12, we come across an instance in which the Japanese Kanji characters in blue have been first transliterated in Roman alphabet, *Meifumado*, and then translated in English as *The Crossroads to Hell*. Fig. 13 illustrates a conventional gloss in which the original term *jitte* is left in the translation and immediately explained in between brackets in the line below, using a different color. Figures 14 and 15 offer the explanation of certain cultural references by means of some rather unobtrusive glosses. From a translational perspective, this approach questions preconceived ideas about the visibility or invisibility of the subtitler. In a rather bold and unconventional way, translators make their unequivocal appearance on the screen, and their color is white.



Fig. 12: *Baby Cart in the Land of Demons*  
(all three lines in white)



Fig. 13: *Zatoichi's Pilgrimage*  
(top line in yellow, bottom line in white)



Fig. 14: *A Touch of Spice*



Fig. 15: *A Touch of Spice*

The same strategy of leaving and explaining foreign terms is applied in Figures 16 and 17, albeit in a much more disruptive and innovative way:



Fig. 16: *Baby Cart in the Land of Demons*  
(top line in white, bottom line in yellow)



Fig. 17: *Baby Cart in the Land of Demons*  
(top line in white, bottom line in yellow)

The duration on screen of both subtitles is some four and six seconds respectively, which is very little time for a viewer to read all four lines of text. Without entering into an evaluation of the potentially disconcerting effect in Fig. 14 of the use of the possessive *her* in the translation, *boys* on the upper line explanation and the image of a girl, this way of presenting the information becomes a real challenge for the viewer because of the short time it appears on screen and its innovative nature. Reading this information takes on a full new twist, at odds with normal practice. Against habit, viewers are here meant to read first the information that appears at the bottom of the screen and then raise their eyes to the top of the screen to start reading the metalinguistic information about the translation. By analogy to footnotes, these new subtitles could be called *headnotes* or *topnotes*.

In an audiovisual market dominated at an international level by USA mainstream movies and iconography, it seems reasonable to assume that consumers of these more exotic films will not be thick on the ground. The use of a different film language, based on aesthetics and plot conventions that diverge from the Hollywood canon, as well as the fact that the dialog exchanges are in Japanese/Greek and the cultural references may be somewhat cryptic, justifies this assumption. The profile of the consumer of these programs has to be by necessity different to that of the average viewer and it is this primary conception of the receiver that would seem to legitimize the use of metatextual notes. We are dealing here with potential viewers highly interested in the Japanese way of living; Japanophiles who watch this type of film to expand their knowledge of the Japanese culture and language.

Another reason for the implementation of this strategy is that DVD, in comparison with cinema or television, allows the viewer greater control in that the projection can be stopped or rewound when considered necessary. This translating strategy could also be exploited, in a slightly modified form, with other types of less marginal films. At present these two subtitle tracks appear simultaneously on screen. However, the DVD could easily be designed so that both tracks were independent and viewers could decide whether to have just one track activated (the subtitles) or the two (subtitles and notes) at the same time. This approach is clearly feasible and would certainly make the most of interactivity in the age of digital technology.

## 5 By way of a conclusion

In view of the panorama presented here, one of the main conclusions that can be drawn is that we are living a period characterized by extraordinary dynamism and creative activity in the world of subtitling in general, and DVD subtitling in particular. With the arrival of DVD it is clear that not only is professional practice changing, in a development which in itself would be worthy of study, but that the very essence of subtitling and the conventions applied are also in flux. The reasons are manifold. Of the various AVT modes, subtitling has experienced the fastest and greatest growth in the market and it will continue along these lines for the foreseeable future. It has many advantages to make it the preferred mode in the AVT world, but three are crucial: it is the fastest, the most economical and the most flexible as it can be used for the translation of almost all types of audiovisual programs. The development and spread of digital technology, fuelled by our society's cult of the image, have accelerated the flow and exchange of audiovisual materials. Subtitling is rapidly becoming the preferred AVT mode on the Internet. This boom and exponential growth has allowed for the emergence of new voices – voices of dissent that subvert rules and conventions traditionally considered standard in the delivery of subtitles.

This climate of change and innovation is, in my opinion, somewhat reminiscent of the exhilaration witnessed during the early years in the history of cinema. After the initial success

of the new medium, filmmakers started to play with more complex and interesting formal properties to keep the public's interest. Virtually every approach was considered worthwhile exploring, from strategies to create coherent spatial and temporal relations within narratives to the coming of sound, without forgetting the many trials at incorporating the written word during the silent era. Despite the belief upheld by some cinematographers that the new medium was to be based solely on images and that the use of the written word in a film was totally objectionable, experiments in the area started early. In the first instance, directors would play with intertitles, predecessors of the subtitles, in an attempt to find a new expressive language. Later, they would also experiment with the incorporation of text in the image itself by means of letters, notes or posters with a diegetic value. Drawing a parallel, the use of colors, cumulative subtitles, explicative glosses and metalinguistic *headnotes* in interlingual subtitling could be considered the fruit of the contemporary agitation that welcomes the advent of a new breakthrough in mass communication: the digital era. If history is cyclical, we seem to be going back in time to propose new practices that look ahead and which might well become routine in the future.

Interlingual subtitles have been traditionally a lot more conventional than SDH and that is why they offer the subtitler more scope to be creative. Paradoxically, and inexplicably, this compelling drive to be creative seems to be counteracted in DVD SDH where the trend appears to be going in the opposite direction, neutralizing the use of colors – as mentioned above – and avoiding the displacement of subtitles to indicate who is speaking, for instance. However, new approaches might be lurking around the corner. Indeed, scholars like Neves (2005) are already working in this direction and putting forward proposals in SDH that are intrinsically linked to the potential offered by digital technology, such as the incorporation into the subtitles of smilies, emoticons, and a limited range of dynamic icons and symbols.

From where can this creativity drive be traced? Digital technology has to be one of the main answers, as it offers a great deal of technical potential for the development of new conventions in subtitling, both interlingual and SDH. It has also changed our perception of audiovisual materials and offered us greater choice. DVD has altered the way in which we consume audiovisual programs, giving viewers an unusual degree of control as to the linguistic combination in which they wish to watch a program. We are dealing with an active rather than passive viewer. The average viewer is increasingly more deeply immersed in the world of the image and has a greater familiarity with new technologies. Never before has there been such a close relationship between films and computers as we see now, with most computers equipped with DVD readers and burners. The television and the computer appear to be converging into one same screen offering very similar functions. They seem to be interchangeable. Today, we can watch the television on our PC or laptop and use the television set as a computer. Interactivity is a buzzword and its potential is enormous.

The profile of this new viewer might well be one of the reasons informing the changes we have observed. We encounter a new viewer avid for information and, therefore, even the initial credits of the film are not only translated, but also transliterated. In the examples offered, more importance seems to be given to the actual cultural referent than to a “correct” translation. The consumer is genuinely interested in the foreign culture and language and the acculturation of terms is avoided. And to do so, the subtitler is prepared to go to great lengths such as the revolutionary use of *headnotes* and glosses on the screen, an occurrence unheard of in our field that throws into disarray previously upheld notions about the translator's visibility or invisibility in AVT.

Despite their apparent innovative nature, these conventions are not so much “new” as “borrowed” from other instances where subtitles are also used, notably video games and *fansubs*. The Internet has fully come of age. Computer subtitling programs have become much more affordable and accessible, with many of them being available free on the net. To create subtitles has become reasonably easy these days, as can be seen in the dramatic

increase of translating practices like *fansubs* ([www.fansubs.net](http://www.fansubs.net), [www.fansubs.org](http://www.fansubs.org)). The origins of *fansubbing* go back to the eighties, when it emerged as an attempt to popularize the Japanese cartoons known as *manga* and *anime*. European and American fans wanted to watch their favorite programs but were faced with two main problems: on the one hand, the linguistic barrier and on the other, the scant distribution of these series in their respective countries. The option was to subtitle these programs themselves. Despite the questionable legality of this activity, the philosophy underlying this subtitling is the free distribution over the Internet of audiovisual programs with subtitles done by fans. The translations are done for free by aficionados and then posted on the Internet. This new form of subtitling “by fans for fans” lies at the margins of market imperatives and is far less dogmatic and more creative and individualistic than that which has traditionally been done. In fact, some aficionados prefer to use the term *subbing*, instead of subtitling, in order to emphasize the peculiar nature of the activity. In the first instance, this practice dealt solely with Japanese *anime* into English, but nowadays it has spread to other linguistic combinations and other audiovisual programs such as films. Little research has been done to date in this field (Bogucki, forthcoming; Díaz Cintas and Muñoz Sánchez 2006; Ferrer Simó, 2005), but it would be hugely interesting to research and analyze these new practices in detail, and to see whether any points of contact can be established with other more traditional practices.

Interlingual subtitling on DVD seems to be leading the way to change, ahead of cinema and television, in all likelihood because of its digital nature. As yet, it is difficult to tell whether the solutions seen here, or some of them, will spread to other media. As far as languages are concerned, the most innovative approaches seen here occur when subtitling from Japanese to English (cf. O’Hagan 2007). Are they the trademark of just a few DVD authoring companies? Will they migrate to other language combinations? The current situation is not clearly defined. We seem to be witnessing a process of hybridization where different subtitling approaches and strategies are competing. Subtitling conventions are not set in stone and only time will tell whether these conventions are just a mere fleeting fashion or whether they are the seed of a new type of subtitling for a new distribution format.

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## Multidimensional Translation: Semantics turned Semiotics

### Contents

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### Abstract

This paper seeks to expand the notion of translation in order to accommodate not only polysemiotic text types, e.g. film and TV, but also nonverbal types of communication. Without denying the importance of the spoken or written word, our aim is to promote a wider, 'multidimensional' understanding of translation. As a means to that end, conceptual tools are provided for dealing systematically with any type of translation encountered today, by establishing a semiotically-based taxonomy of translation. In addition to the strictly semiotic distinctions between various types of translation, a main distinction is found between inspirational translation (e.g. audio description) and conventionalized translation (subtitling and dubbing, for instance), yielding a total of 30 types of translation.

### 1 Translation: more than just words

Reflecting the ever-increasing communicational output – from cellphone text messages to live multi-media presentations – is the growing need for translation. Mass-media products as well as acts of communication with more limited audiences are being translated in unprecedented numbers, and recent decades have also witnessed a growing scholarly interest in the field of translation.

New media require new methods of translation, and audiovisual media, in particular, represent challenges to the translator not known before the invention of sound film back in 1927. But still, what we translate – whether we work as literary translators, interpret at conferences, localize computer software, or subtitle films for DVD – is, basically, words.

A primary aim of this paper is to expand the notion of translation in order to accommodate not only the nonverbal channels present in much modern communication, but also the types of communication not involving language in a traditional sense. Although much has been written on translation in recent decades, very few titles (e.g. Poyatos (ed.) 1997; Gambier and Gottlieb (eds) 2001) have been concerned with nonverbal factors in (verbal) translation, let alone nonverbal translation as such.

However, it is not my intention to diminish the importance of the spoken or written word, neither in original texts nor in translations. All I wish to accomplish is to contribute to a wider

understanding – through a multidimensional approach<sup>1</sup> – of the field of translation, so that the various features of (interlingual) translation so often discussed in Translation Studies will stand out more clearly against a background of translation in its totality.

As a means to that end, and taking as our point of departure the complex (polysemiotic) textual nature of film and television, this paper intends to provide conceptual tools for dealing systematically with any type of translation encountered in today's media landscape by establishing a semiotically based taxonomy of translation.

## 2 Textures of translation

Any kind of translation is a multi-faceted entity, and even the word 'translation' covers at least two dimensions: (1) time, including the semantics and temporal progression of the translational *process* and (2) space, including the semiotics and texture, or composition, of the translational *product*.

The process of translation involves a chain of disparate and consecutive entities, ranging from the conceiver(s) of the original text, via the text itself to the receivers of the translated version of it. Even the translational product is a complex notion. As a simultaneously presented synthesis of signs constituting either a mono- or polysemiotic text, the translated text encompasses much more than the rephrasing of original verbal utterances. Even in the case of 'words-only' – i.e. monosemiotic – texts, other factors than verbal semantics form part of translational products.

Below we shall have a close look at those parameters that constitute texts (in a wide sense of that word) as well as those that shape the profile of finished translations. Of special interest here is the semiotic composition of source vs. target texts, and the effect of non-verbal factors on the verbal rephrasing of polysemiotic texts – of which films and TV productions are among the most well-researched, yet not the only types deserving scholarly attention.

Traditional translation studies have almost exclusively dealt with texts that are seen as 'verbal only', whether written – e.g. literary or technical texts – or spoken, i.e. oral discourse to be interpreted. Although such texts communicate through one semiotic channel only, and thus deserve the label 'monosemiotic', they are not abstract verbalizations of a message just waiting for someone to read them, hear them, or translate them. As Patrick Zabalbeascoa, having studied the workings of dubbing, aptly puts it, "no text can be made entirely of verbal signs because such signs always need some sort of physical support." (Zabalbeascoa 1997:338).

Naturally, this 'physical support' gains semantic momentum in genuinely polysemiotic texts. The most prominent polysemiotic text type is the audiovisual text, defined by Frederic Chaume as "a semiotic construct comprising several signifying codes that operate simultaneously in the production of meaning." (Chaume 2004:16).

### 2.1 Translation in the web of semiotics: Distinctions and definitions

As semiotics implies semantics – signs, by definition, make sense – any channel of expression in any act of communication carries meaning. For this reason, even exclusively non-verbal communication deserves the label 'text', thus accommodating phenomena as music and graphics, as well as sign language (for the deaf) and messages in Braille (for the blind). In a Translation Studies context, the two latter categories representing strictly conventionalized communication may very well be considered along with verbal-only (monosemiotic) and

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<sup>1</sup> cf. also Jorge Diaz Cintas', Heidrun Geryzmisch-Arbogast's and Minako O'Hagan 2007

multi-channel (polysemiotic) texts. As opposed to what is true of music and graphics, relatively simple algorithms exist that would transform messages in Braille or in one of the world's many sign languages into a vocal language – either written or spoken. As a case in point, the intersemiotic process of translating from the tactile to the visual mode (or vice versa, cf. Mathias Wagner 2007) – e.g. when a text in Braille is translated into a 'the same' text using alphanumeric characters – is certainly simpler and more rule-governed than the process of translating a printed text from one verbal language into another. Both, however, remain conventionalized, as opposed to, say, commentating a baseball match for radio listeners.

### 2.1.1 Defining the notions of language, text and translation

As not all languages are verbal, an all-encompassing definition of 'language' may read as follows: "*animate communicative system working through the combination of sensory signs.*" (Gottlieb 2003b:167). This implies that, in reverse, 'text' may be defined as "*any combination of sensory signs carrying communicative intention*".

Based on this communicative definition of 'text', an equally broad definition of 'translation' may be ventured, namely: "*any process, or product hereof, in which a combination of sensory signs carrying communicative intention is replaced by another combination reflecting, or inspired by, the original entity.*"

The colossal range of translational phenomena encompassed by this multidimensional definition<sup>2</sup> may be categorized according to the following four parameters:

- I) semiotic identity or non-identity between source and target texts, distinguishing *intrasemiotic* types of translation from *inter semiotic* types,
- II) possible changes in semiotic composition of the translation which may be (a) *isosemiotic* (using the same channel(s) of expression as the source text), (b) *diasemiotic* (using different channels), (c) *supersemiotic* (using more channels), or (d) *hypoemiotic* (using fewer channels than the original text),
- III) degrees of freedom for the translating agent, distinguishing *inspirational* from *conventionalized* types of translation, and
- IV) presence or absence of verbal material in source and/or target texts, creating a distinction between translations that (a) *remain verbal*, (b) *introduce nonverbal elements*, (c) *introduce verbal elements*, or (d) *remain non-verbal*

Before discussing the vast array of translational types, the four central juxtapositions listed above will have to be defined:

#### I) Intersemiotic vs. Intrasemiotic translation

- Ia) In *intersemiotic* translation, the one or more channels of communication used in the translated text differ(s) from the channel(s) used in the original text. In other words, the source and target text are semiotically non-equivalent.
- Ib) In *intrasemiotic* translation, the sign systems used in source and target text are identical; a case of semiotic equivalence. Whereas 'intersemiotic translation' is a notion directly borrowed from Roman Jakobson (1959), the term 'intrasemiotic translation' is used here as an umbrella term for Jakobson's 'interlingual' and 'intra lingual' types of translation.

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<sup>2</sup> For a definition of multidimensional translation cf. also Heidrun Geryzmisch-Arbogast 2007.

- *interlingual* refers to translation between two languages, while
- *intralingual* covers the following subcategories:
  - *diachronic* translation (between different historical stages of the same language)
  - *dialectal* translation (between different geographical, social or generational variants of the same language),
  - *diamesic* translation (implying a change in language mode; i.e. from speech to writing or vice versa),
  - *transliteration* (which involves a change in alphabet).

## II) Isosemiotic vs. diasemiotic, supersemiotic and hyposemiotic translation

- IIa) The prototypical translation, sometimes termed ‘translation proper’, is not only intralingual (and thus, by definition, intrasemiotic), but also *isosemiotic*, i.e. communicating through exactly the same semiotic channels as the original. Naturally, this embraces all sorts of printed translations – from translated novels to localized software manuals reusing the original illustrations while adapting the verbal text to foreign-language markets. Isosemiotic translation encompasses both monosemiotic text types (oral discourse being interpreted for foreign-language speakers) and polysemiotic texts (the most conspicuous example being dubbing, in which the original semiotic composition is maintained in translation).
- IIb) *Diasemiotic* translation is characterized by its use of different channels, while the number of channels (one or more) is the same as in the original text. A monosemiotic example of diasemiotic translation is written music (with notes representing musical sounds), while subtitling exemplifies diasemiotic translation of a polysemiotic text (with letters representing speech sounds)<sup>3</sup>.
- IIc) In supersemiotic translation, the translated texts displays more semiotic channels than the original – as when a novel is semiotically unfolded into a film.
- IId) Lastly, the term *hyposemiotic* translation implies that the semiotic ‘bandwidth’ of the translation is narrower than that of the original. When considering the translated *production*, we see this when, for instance, a mime artist performs a dramatical piece originally including spoken lines. However, when we focus on translation *reception*, audio-described stage plays for the blind, as well as TV shows captioned for the deaf fall into this category as well.

## III) Conventionalized vs. Inspirational translation

- IIIa) *Conventionalized* translation – with both intrasemiotic and intersemiotic types represented – uses some degree of formulaic conversion of the source text en route to the target text. Representing anything from strict conversion algorithms (as when translating between writing and Braille) to methods more resting on norms and conventions (as when dictionaries and other works of reference are used as tools in interlingual, written translation), conventionalized translation stays transparent by establishing a direct link between source and target texts, and criteria for evaluation are easily established – although not always totally agreed upon.
- IIIId) *Inspirational* translation covers situations where the existence – and reception, to be exact – of one text triggers the production of another based on the first one. The resulting text – no matter its semiotic composition – will relate to the original in a way

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<sup>3</sup> cf. also Jan Kunold forthcoming

which is more free and less predictable than what is found in conventionalized translation. Following from this is the inability to reconstruct the original from the translated version, something which – to a certain extent – is possible with conventionalized translation.

The terms ‘conventionalized’ and ‘inspirational’ have been employed partly in order to pinpoint the difference between the two conceptual counterparts, partly to make room for a wider interpretation of the notion of translation than what is seen whenever ‘real translation’ and adaptation are juxtaposed. In a French-speaking context, the term ‘tradaptation’ has been suggested as a lexical bridge across the gap between translation and adaptation (Gambier 2004:179-180).

#### IV) Verbal vs. nonverbal translation

- IVa) Translations that *retain their verbal channel* include all intralingual and all interlingual translations, ranging from an American remake of a Japanese movie to the ‘Maltese’ transliteration of Arabic words into Latin lettering. Here we deal with verbal translation.
- IVb) Translations that *introduce nonverbal elements* include genres as disparate as to poetry turned into songs and non-smoking pictograms in bars and restaurants. These are all examples of *deverbalizing translation*.
- IVc) Some translations *introduce verbal elements*, as when a signer is interpreted into vocal language, or a text in Morse code is decrypted. These types are all examples of *verbalizing translation*.
- IIId) Finally, translations that *remain nonverbal* include both linguistic entities (such as interpreting between two sign languages) and non-linguistic ones, e.g. the drawing of a sculpture. Here we talk about *nonverbal translation*.

## 2.2 Translation in a nutshell: Establishing a general taxonomy

Following the four main distinctions (listed as points I-IV above), a taxonomy can now be established with the purpose of accommodating all existing and potential types of translation – categorized according to their semiotic qualities.

Based on the broad definition of ‘text’ provided above, the taxonomy categorizes the various types of translation from the end user’s perspective, and in doing so, encompasses four kinds of cognitive decoding activity:

1) translations acting as *text substitutes* for an audience who, due to either (a) sensory or (b) linguistic impairment are expected not to be able to decode the original. In the former case, signed news on television resemble – monosemiotic as this genre is – radio news for hearing audiences. In the latter case, for instance when DVD audiences lack the command of the foreign language heard on screen and select a domestic-language soundtrack, the resulting viewing experience emulates that of watching a domestic production.

2) translations as *text enhancers* (e.g. when a PowerPoint presentation shows numerical relations turned into graphics), thus boosting the impact of the original figures, which on their own terms may not be cognitively fully comprehensible to the audience,

3) translation *crossovers* (audiobooks on CD, for instance) that are enjoyed by ‘impaired’ and ‘non-impaired’ audiences alike, and finally,

4) translations that are cognitively *supplementary*, as audiences have simultaneous access to, and understand, the original text. This phenomenon is mainly found in the audiovisual

media, as multilingual audiences read subtitles while listening to the original dialog. In this mode of reception, widespread in ‘hardcore’ subtitling countries, the viewer processes dialog and subtitles as ‘diamesic twins’, while oscillating between (I) using subtitles as an aid to understand the original dialog, and (II) using the original dialogue to evaluate, and criticize, the subtitles.

Whereas reception modes 1 and 2 are intended by the translational agents (the translator, the publisher/broadcaster, etc.), mode 3 is a ‘free’ and unintended spin off from mode 1a; audiobooks, for example, are designed for visually impaired audiences, not for drivers. As far as mode 4 is concerned, this game of ‘spot-the-error’ has long become a national pastime in Scandinavia, the result being that in working from English, subtitlers – in constant fear of being accused of not giving the ‘precise’ translation of what is said – sometimes prefer unnatural-sounding constructions (Gottlieb 2001:216). Hopefully, when optional subtitles find their way from DVD to digital TV, reception mode 4 will fade out, leaving subtitlers with the degrees of freedom enjoyed by translators producing substitutional translations.

All translations – and, indeed, all texts – have an audience in mind – be that well-defined or of a more general nature. For this reason, the typological classification presented in tables 1 and 2 is based on *audience perception*, i.e. how each type of translation is cognitively processed by the intended audience. This means that types belonging to category (1) above would be categorized differently if the point of departure was text composition, not audience perception.

### **3 Taxonomies of translation: Semiotics as perceived**

In the two tables below, one random example is given for each translation type (i.e. each cell). In the section following the tables, each type represented in the taxonomy will be discussed, and the examples will be explained.

#### **3.1 The translational range explained through examples**

In the following sections, each of the 30 sub-categories (cells) of the taxonomy will be treated successively, the numbers are referring to the numbers used in the tables 1 and 2. Usually, only one example from each cell will be discussed, and while sometimes that example is one out of a limited number of types or genres in that particular cell, other cells may represent more types, or may have attracted more scholarly attention, or may seem more important to the reader. Still, I have tried to represent types from all thirty cells in a balanced way, since – judged from a semiotic point of view – all translational categories are equally interesting. It is my hope that with the aim and scope of the present paper, readers will share my point of view and readily join me in this exploration of the realm of translation.

TARGET TEXT SEMIOTICS	INTERSEMIOTIC TYPES					
	Inspirational translation			Conventionalized translation		
	Nonverbal	Deverbalizing	Verbalizing	Nonverbal	Deverbalizing	Verbalizing
<b>Isosemiotic (same channels as original)</b>	[0. Not possible: contradiction in terms]					
<b>Diasemiotic (different channels)</b>	1. Music based on sculpture	4. Poem into painting	7. Ball game on radio	10. Written music	13. Pictograms	16. Morse code decryption
<b>Supersemiotic (more channels)</b>	2. Animation film based on music	5. Screen adaptation of novel	8. Ball game on TV	11. Statistical pie charts	14. Acted stage directions	17. Interpreted sign language user
<b>Hyposemiotic (fewer channels)</b>	3. Sketch of bee dance	6. Play turned mime	9. Audio description on DVD	12. Notation of ballet	15. Manual in Braille	18. Charts mediated to the blind

Tab. 1: *Intersemiotic Types: Total Taxonomy of Translation as perceived by the intended target text*

TARGET TEXT SEMIOTICS	INTRASEMIOTIC TYPES					
	Inspirational translation			Conventionalized translation		
	Nonverbal	Interlingual	Intralingual	Nonverbal	Interlingual	Intralingual
<b>Isosemiotic (same channels as original)</b>	19. New musical arrangement of standard tune	20. Remake of foreign film	21. Contemporary adaptation of 'classic' film	22. Sign interpreting	23. Dubbed film	27. Trans- literation
<b>Diasemiotic (different channels)</b>	[None known to the author]				24. Subtitled 'exotic' film	28. Audiobook on CD
<b>Supersemiotic (more channels)</b>					25. Subtitled familiar- language film	29. Captioned commercials for hearing audiences
<b>Hyposemiotic (fewer channels)</b>					26. Live radio interpreting	30. Subtitling for the deaf

Tab. 2: *Intrasemiotic Types*

### 3.1.1 Intersemiotic translation

By definition, any intersemiotic translation would have to use a different set of communicative channels. Hence, this row of potential cells remains void.

#### Inspirational types

Non-verbal → non-verbal text

1. This first type of translation operates (by inspiration) between two different, monosemiotic types of expression (= texts), e.g. from a sculptural expression to a musical one.
2. A striking example of this type, in which the semantic texture is becoming more complex in translation, is the animated Disney cartoon *Fantasia* from 1940, which presents the musical works of Bach, Tchaikovsky, Stravinsky and others while at the same time reflecting the musical score in moving images.
3. A case of the opposite movement, that of semiotic simplification, is found when, for instance, a person draws a sketch of the way bees communicate. While the original ‘text’ is spatial and includes sound signals, the drawing is two-dimensional and mute, but still a fair representation – in a dictionary, for instance – of the original phenomenon.

Verbal → not (only) verbal text

4. Operating with very large degrees of freedom, replacing a poem by an illustration of it still produces a text of similar semiotic complexity as that of the original.
5. One of the only non-interlingual examples often discussed in translation studies belongs to this category: screen adaptation – in which a monosemiotic work (typically, a novel) is semiotically ‘unzipped’ and thus recreates the underlying (poly)semiotic structure of the dramatic work.
6. When, for instance, a play is turned into mime, vocal language is lost, and movements matter more than when they are counterbalanced by words. In this ‘concise’ category of translation, fewer channels must carry the semantic load formerly shared by more channels.

Non-verbal → verbal text

7. Verbalized texts in this category include phenomena that are relayed on to an audience bereft of the ability to comprehend the original text, i.e. a radio-transmitted baseball match, in which the natural sound effects are kept in the background, while the visual action on the field is substituted by verbal narration.
8. Representing the same ballgame on TV, however, would be a different type of translation. Here, the verbal layer added by the commentator (who does not have to explain the action as such, but fills in background information etc. in order to avoid producing intersemiotically redundant messages) supplements what the viewer already sees on the TV screen. In this way, apart from the missing ambience of the stadium, TV viewers get ‘more’ information than do the spectators at the stadium.
9. An example of the complexities of polysemiotic translation, audio description on DVD translates two channels – non-verbal image (pictorial content) and verbal image (existing captions and displays) – into one: a verbal depiction, presented (optionally) as an integral part of the film soundtrack, whether original or dubbed. Audio description is thus a modern-day version of the classic tradition of *ekphrasis*, in which “a verbal text describes a work of visual art” (Eco 2004: 110). The reason for placing what might be seen as an

additive type of translation in the ‘reductive’ category is that although some of the visual information of a film is represented through audio description, the fact remains that the entire film is now communicated through two channels only: the verbal oral and the non-verbal oral channels. The verbal visual and non-verbal visual channels remain inaccessible to blind audiences, who are the very *raison d’être* of this type of translation. (cf. Benecke 2004.)

### Conventionalized types

Non-verbal → non-verbal text

10. A classical example, literally speaking, is found in written music, in which each note in a sequence denotes pitch as well as duration. As with other types of conventionalized translation, there is some leeway of interpretation – not only going from written to performed music, but also when trying to translate live music to paper (cf. Jan Kunold forthcoming)
11. Instead of merely switching between channels of representation – as in the previous example – we are here concerned with adding new semiotic layers to the original text. Dealing with numbers, which although part of the alphanumerical reality of written communication can hardly be termed verbal, illustrating numerical relations by means of bar or pie charts while keeping the actual figures as part of the graphic whole is an example of this additive category of translation.
12. As opposed to the previous two categories, we are here talking about translations that operate through fewer semiotic channels than those present in the original – a case in point being ballet notation, in which complex three-dimensional movements in real time are represented on paper.

Verbal → not (only) verbal text

13. Pictograms, road signs and other non-verbal logos are examples of conventionalized translation of verbal entities. Interestingly, certain speech communities use these non-verbal messages a lot less than others. As regards traffic signs, for instance, the Anglo-American tradition is heavily verbal, with utterances like ‘Reduce speed now’ commonly seen on roads.
14. Translating stage directions into theatrical performance is a classic example of supersemiotic translation, in which what is exclusively verbal is ‘branched out’ into spoken lines plus body language and movements on stage (cf. Yvonne Griesel forthcoming).
15. Braille, an internationally successful tactile writing system for the Blind, replaces printed letters by a fixed combination of raised dots. Thus it represents extremely conventionalized translational procedures, yet it only caters for alphanumerical text elements. Thus, certain illustrations in manuals and textbooks would have to be left out or explained in Braille along with the verbal elements of the original book, thus replacing a polysemiotic original by a monosemiotic translation.

Non-verbal → verbal text

16. The encryption and decryption of Morse code, is a perfect example of diasemiotic translation, with the unique feature that a 1:1 relationship is found between original and translation, meaning that translating the same message back and forth will not in any way

alter the content. Morse code could be said to be the extreme exponent of conventionalized translation, with no ‘artistic license’ granted to the translator.

17. When perceived by ‘wrong’ target-language audiences, certain semiotic channels may yield little or no information. As a case in point, hearing persons who do not understand sign language and for whom a sign language user is interpreted into a vocal language, will experience two semiotic layers in the message addressed to them: the almost entirely incomprehensible (soundless) sign language and the spoken language – their own vernacular. So although this is a case of ‘more channels’ perceived by the user – providing that he or she is not blind or visually impaired – the original text (signing) remains nearly void of information. Here, the target user possesses the sensory capabilities for comprehension, but lacks the skills for encryption of the sign language code.
18. A typical example from this category, a ‘conventionalized’ parallel to category number 9, would be the graphics (pie charts including numbers) of category 11. When communicating the content of such charts to blind audiences, the information from two semiotic channels is condensed into one: oral communication.

### 3.1.2 Intrasemiotic translation

#### Inspirational types

Here we are dealing with what may be termed “reformulation of a given expression within the same semiotic system” (Eco 2004: 131). As is obvious from Tab. 2, many potential cells stay void, as no examples are expected to exist, partly for logical reasons. However, the empty cells do not represent a clear cut case of *contradictio in adiectio*, hence the label ‘none known to the author’.

19. A well-known exponent of the first sub-category, where translation takes place between nonverbal entities, is a re-interpretation in the form of a new musical arrangement of an existing work, e.g. a jazz standard. The result is a different textual expression within the semiotic confines of performed music.
20. In the interlingual sub-category, another phenomenon attracting a lot of public attention is remakes of films. Instead of merely translating the verbal elements (as in dubbing and subtitling, see below), a remake transplants the entire film, setting and all, into the target culture. The resulting film may appear to be an original work, but as it is based on an existing storyline etc., it is indeed a translation.
21. Remaining within the realm of film, an intralingual example of inspirational translation would be the adaptation, or remake, of a domestic film classic. With the exception of Shakespearean screen adaptations, such new versions of old films would either alter outdated elements of the script, or come with an entirely new dialog list.

#### Conventionalized types

Non-verbal → non-verbal text

22. When, for instance, American Sign Language (ASL) users are interpreted for Deaf audiences in Britain using British Sign Language (BSL), this is done through a bilingual sign interpreter – strictly within the confines of the semiotic system ‘signing’, in this taxonomy categorized as ‘non-verbal’.

Interlingual translation: L1 text → L2 text

23. To most non-experts and a few traditional translato­logists, out of the thirty types offered in this taxonomy, only this category qualifies as translation. In traditional terms, interlingual, conventionalized and isosemiotic translation *is* translation. And, to be fair, this cell in the matrix of translation is packed with various translational sub-types and genres – and (over)represented in innumerable works on translation, ranging from short in-house manuals for technical translators to verbose academic treatises on literary translation. Apart from printed translations, also several types of interpreting, as well as dubbing, fit into this category. What is common to all these sub-types of translation is that they retain the semiotic composition of the original while recreating the semantic content in another (verbal) language.
24. In this taxonomy, subtitling – although diasemiotic – is still considered intrasemiotic. It could be argued, of course, that as part of the diamesic shift (from speech to writing) subtitling would qualify as intersemiotic. However, as what is verbal in the source text remains verbal, this movement from spoken lines to written text is considered intralingual, while the transfer from language 1 to language 2 – whenever foreign-language productions are subtitled – is what places ‘normal’ subtitling firmly in the interlingual column here. Another argument in favor of considering subtitling intersemiotic, namely that of pointing to the written subtitles as a semiotically foreign element in the translated film, must be refuted as well. The reason for that is that as (original-language) film and television make use of written signs – in the form of captions and displays – the semiotic *composition* as such is not changed through subtitling, although the semiotic *balance* is undeniably shifted from predominantly aural to predominantly visual text reception. The visual impact of subtitles is illustrated by the fact that interlingual subtitles are now the dominant written genre in Denmark, with the average person spending more than 37 minutes daily reading subtitles at home while watching television, videos or films on DVD. (Gottlieb 2003a). With time, and depending on national educational systems etc., the communicative power of the written subtitles may decrease as audiences pick up not only intonational cues, but also substantial semantic and stylistic elements in the original dialogue – especially, of course, if this is in English. In that situation, we will find ourselves in the next category.
25. Whenever – as is now the case in several parts of the world – major segments of target-language viewers understand the source language (as outlined just above), subtitles are no longer dialogue *substitutes*, but become *supplementary* in the reception of foreign-language productions (cf. the discussion in section 2.2). Thus, the polyglot viewer embraces more semiotic channels than those found in the original version – a phenomenon never found within strictly substitutional translation, such as dubbing. This doubling of verbal channels is also found when a DVD is played with both subtitles and soundtrack in the target language.
26. The reverse situation – where the final recipients have fewer semiotic layers available to them than the original audience had – is found when, for example, someone addressing his countrymen in L1 is interpreted on radio, or through other monosemiotic media, into L2.

Intralingual translation: L1 text → new L1 text

27. Not only monosemiotic entities – e.g. the transliteration of a printed text from Latin into Cyrillic writing, or from Kanji to Hiragana – are found in this category. Also linguistic conversions that form part of polysemiotic texts are placed here, as for instance new

dubbing tracks for classic movies – something that is often seen with animated films dating back fifty years or more.

28. The simplest example of this diasemiotic category of translation is transcription – which is a major element of intralingual subtitling. An ‘opposite’ example is the production of audiobooks. With the shift of medium – from paper to tape or CD – comes the perceptual shift from reading to listening. Aimed at visually impaired or dyslexic audiences, such intralingual book translations also satisfy a demand among normal readers for literature which is accessible while driving a car, doing household chores, etc.
29. It is a well-known fact in advertising that redundancy enhances the effect of a (commercial) message. What we talk about here could be termed ‘diamesic redundancy’, as a spoken message is supplemented by the same message in writing – sometimes expressed more concisely, but always presented in synch with the oral slogan. The same diamesic duplication is found when hearing audiences are watching domestic-language TV programs with subtitles intended for non-hearing viewers.
30. On the other hand, whenever Deaf communities watch domestic productions with optional (teletext or DVD) subtitles, what they perceive is a text which includes a smaller number of semiotic channels than the original. Whereas the original production spans four semiotic channels (images, captions, dialog and sound effects), information communicated by the two acoustic semiotic channels is represented by writing, and thus – in semiotic terms – merged with the caption layer of the original. Seen in isolation, the (few) instances where sound effects are rendered in the subtitles – as for instance “Doorbell rings” or “Waves washing ashore” – would qualify for membership of category 18: hyposemiotic verbalization. (For a discussion of subtitling for the deaf, see Kurz and Mikulasek 2004, cf. also Neves 2005).

### **3.2 On absolute categorizations and relative realities**

Having now established a supposedly total taxonomy of translation, in which no translational act or artifact should be deprived of categorization (an exception being the transfer of the visual to the haptic mode, cf. Mathias Wagner 2007). I must hasten to state that with semiotically complex entities such as various online texts and other electronic media products, categorization is not always a matter of course. Different foci may lead to different categorizations, or – more accurately phrased – as several text types are semiotic composites or mosaics, any categorization of such entities will have to consider the ‘odd’ parts of the text.

In the field of computer games, for instance, one may come across a game in which captions are translated while dialog is not (cf. O’Hagan 2007). Similarly, localized web pages often ‘forget’ to translate certain textual elements, anything from drop-down menus to videoclips (cf. Sandrini forthcoming).

Some audiovisual products may also be categorized differently according to which elements you are considering. An interesting case in point is found whenever Western films (with captions and displays in Latin letters) are voiced-over – an isosemiotic translation procedure – into languages using Cyrillic script. Not only will such written signs be read aloud by the narrator, which is a case of diasemiotic translation; even ‘untranslatable’ names will have to be read aloud, since they are encoded in an alphabet unknown to the common viewer – a case of transliteration. This means that different elements of, for instance, a Russian video version of an American movie may be referred to three different translational categories, a logical result of the intricate relations between the original polysemiotic mosaic and its translation.

## 4 Semiotic composition, perception and impact of screen translation

In the following sections of this paper, we will focus on screen translation while maintaining a primarily semiotic approach. Admittedly, the term ‘screen translation’ is not entirely self-explanatory, neither is the competing term ‘audiovisual translation’. As is often the case, the best term may be found in another language, in this case Danish. However, introducing the Danism ‘billedmedieoversættelse’ (literally: picture media translation) in English is not exactly practical, so ‘screen translation’ will do.

As this term, slightly imperfect as it is – especially in an exploratory context as this – may imply any kind of translation on any kind of screen, I will need to define screen translation as “the translation of transient polysemiotic texts presented onscreen to mass audiences”.

The label ‘transient’ is included in order to keep the focus on the classical notion of ‘moving pictures’. Without that definitorial limitation, static images with captions presented on screens would qualify as well. Accordingly, the notion screen translation includes translations of

- films displayed on ‘silver screens’ in cinema theaters,
- broadcast televised material on TV screens,
- non-broadcast televised (DVD) material on TV or computer screens,
- online audiovisual material on computer screens.
- As is seen, screen translation does not encompass translations of
- \*teletext pages on TV screens,
- \*written texts on computer screens (web pages, email messages, etc.),
- \*plays and operas performed on stage (surtitled productions).

Compared with earlier notions of screen translation, the definition suggested above implies that screen translation is not necessarily interlingual – with dubbing, subtitling and voice-over as three dominant types. Catering for special audiences, subtitling for the deaf and hard of hearing and audio description (*intralingual* and *intersemiotic*, respectively), also qualify as screen translation.

In the following, a semiotic comparison of these five types of screen translation will be made, starting with an ‘objective’ juxtaposition of the impact on the target audience of each type.

	Original production (TV/DVD)	Subtitled version	Dubbed version	Voiced-over version	Deaf and HoH version	Audio-described version
Image	1	1	1	1	1	—
Writing	4	2	4	4	2	—
Sound effects	3	4	3	3	—	2
Speech	2	3	2	2	—	1

Tab. 3: Impact ranking of semiotic channels in screen translation

Tab. 3 gives a fairly uncontroversial ranking of the four basic semiotic channels used in filmic media.

- a) Image, including both composition (in space) and montage/editing (in time).
- b) Writing, including displays (as ‘seen’ by the camera) and captions (including credits, toptitles and subtitles).
- c) Sound effects, including on-location sounds and music as well as music and effects added in post-production.
- d) Speech, including ‘meaningful’ lyrics, but excluding inaudible background dialogue

The ranking is based on an average filmic production, one that is found toward the center of the field in which genres like sitcoms (some of which can be ‘enjoyed’ without watching the action), very ‘pictoresque’ films and transmissions from concerts place themselves in more marginal positions.

It should come as no surprise that while the two modes of revoicing – dubbing and voice-over – display the same semiotic ranking as that of the original, ‘normal’ subtitling skews the semiotic ‘division of labor’ in the viewer, while intralingual subtitling and audio description – as they are perceived by their core audiences – represent total shifts in the semiotic balance of the original production.

In the following table, I suggest a closer look at the cognitive semiotic changes implied by the intrinsic qualities of the five translational types: How much of the semantic load communicated to the audience is carried by each semiotic channel? Or, phrased in more market-oriented terms: What are the shares of attention for each channel?

This table – an attempt to quantify the rankings listed in Tab. 3 – shows the colossal difference in attention shares (and impact) between the various semiotic channels. Lacking available empirical studies on audience perception of various translation methods, let alone systematic comparisons of semantic content related to semiotic structure, I have based the figures in Tab. 4 partly on my personal experience as a subtitler, partly on theoretical studies by myself and others (cf. Gottlieb 1997).

As will be obvious from the above remarks, the figures in Tab. 4 are rough estimates that illustrate, among other things, how subtitles (for hearing audiences) distract attention from the image, and that of all semiotic channels, sound effects constitute the most ‘constant’ communicative factor. The fact that neither sound effects nor speech are listed as having any

	Original production (TV/DVD)	Dubbed version	Voiced-over version	Subtitled version	Deaf and HoH version	Audio-described version
Image	55%	55%	55%	40%	65%	—
Writing	2%	1%	0%	32%	35%	—
Sound effects	18%	18%	18%	18%	—	35%
Speech	25%	26%	27%	10%	—	65%

Tab. 4: *Relative impact of semiotic channels in screen translation*<sup>4</sup>

<sup>4</sup> Figures based on personal experience Gottlieb (1997)

communicative value in the Deaf and HoH column of course only applies for the primary target group for intralingual subtitling: the Deaf community. Likewise, the shares for audio description apply for truly blind people, who may not be the sole audience segment benefiting from that mode of translation.

Although making the exact research design is not going to be simple, empirical studies of audience processing of semantic information in various semiotic channels are much needed. A lot has been said concerning the relative qualities of, say, dubbing and subtitling, but little is yet known (cf. Koolstra et al. 2002 and the extensive bibliography in Gottlieb 2002b).

## 5 Ideals and realities in translation

Although many aspects of translation have been thoroughly investigated in recent years, we often lack empirical evidence or rely on uncorroborated assumptions in the field of translation studies – as I admittedly did in the previous section.

A few of these assumptions will be dealt with in the following two sections addressing, respectively, translation in general and screen translation in particular. Although several of the notions to be discussed do make sense in many contexts, I do not mind assuming the role of devil’s advocate here; what counts is that established notions be challenged.

### 5.1 Debatable common notions on translation

Among the many claims, credos and concepts that are commonly accepted in contemporary translation studies circles are the three notions listed in Tab. 5, to be discussed in the following paragraphs:

Notions	Counter-arguments
1) Translation strategies (as instrumental in translational work)	a) Translators often don’t make conscious choices b) Translators often see only one solution
2) Acceptability (as a guiding principle) in translation	‘Acceptable’ semantic or semiotic changes may betray the text
3) Original version	a) Basic version serves as template only b) Basic version is a translation itself c) Several languages coexist in basic version

Tab. 5: Debatable Notionas – Translation in general

#### 5.1.1 How strategic are translators?

Among the many notions that go almost uncontested, is the entity *translation strategies*. This concept – which most translation scholars, including myself, find very useful – is sometimes seen as the guiding principle behind all translational activity: “Each part or aspect of a translation can be perceived as the outcome of a process of choosing among various possible solutions in the light of all the operative factors of the moment” (Zabalbeascoa 1997:337). This is also implied in much theoretical work<sup>5</sup>.

<sup>5</sup> cf. As an example Heidrun Geryzmisch-Arbogast/Klaus Mudersbach 1998

However, only very conscientious, gifted and imaginative translators are able to live up to such expectations. In much professional translation work – and whenever even talented translators work under time pressure, a common occurrence indeed – there simply is no ‘process of choosing among various possible solutions’ and no awareness of ‘all the operative factors’ involved. Often, translators are happy to be able to just hit on one solution to the problem at hand; conscious comparisons of the pros and cons of a whole series of alternative solutions is wishful thinking, rather than normal practice, in great parts of today’s translation industry.

Top-notch translators may, if asked to do so, list several solutions to a translational problem, but this is not their typical *modus operandi*: “Translators simply behave like polyglots, because in some way they already know that in the target language a given thing is expressed so and so. They follow their instinct, as does every fluent bilingual person” (Eco 2004:182; emphasis added).

No matter whether we look at technical or literary translation, film subtitling or conference interpreting, most translators see themselves as common soldiers in the battlefield, rather than armchair strategists calmly considering their next move.

### **5.1.2 How acceptable is ‘acceptability’?**

When the classical ideal of equivalence came under fire in the 1970s and later, the need for an alternative ideal in translation soon became obvious. One of the most acknowledged suggestions for a guiding principle in a ‘post-equivalence’ world turned out to be the notion of ‘acceptability’, by Gideon Toury (1995), who preferred *acceptability* (meaning that the translated text made sense in the target culture) to *adequacy* (i.e. the truthfulness of the target text *vis-a-vis* the source text).

Although the pragmatic attitude expressed by the proponents of *acceptability* was refreshing, and played well together with the multi-purpose potential of the *Skopos* theory launched by Hans J. Vermeer and others (nicely summarized in Vermeer 2000), the manipulations of the source text encouraged in the process may lead to major distortions of the original content and form. Whenever a fictional work – which, strangely enough, is the genre most often mentioned in connection with the *acceptability* principle – is translated, the target audience have reason to expect that what they are getting is a truthful representation of the original work, whose author is still featured on the front page.

As with the notion of ‘translation strategies’, we are once more confronted with a gap between theoreticians and practitioners: Very few literary or film translators take such liberties in their translations as those that would be possible within the paradigm of ‘acceptability’. And little wonder, when the target audience in most speech communities buy foreign-language books or films, they expect and accept the foreign culture to show.

In contrast to the ‘anything goes’ attitude that may be inferred from the *acceptability* principle, I suggest a revival of the principle of *adequacy*. Whenever that principle is deemed too foreign, narrow or naive for a specific translation, an honest alternative would be to produce an *inspirational translation*, as defined in section 2.1.1 above. That would grant full artistic license to the translator/author of the new text, without postulating that this is a *bona fide* translation (as the audience would understand it) of the original text.

### **5.1.3 What constitutes an original text?**

“Subtitles, I’d like to think, are a token of peace. *Toute l’émotion de la V.O.*” (Rich 2004:168). In subtitling, the concept of an original soundtrack is fundamental, and even the term ‘original’ is almost universal. Thus, in referring to a foreign non-dubbed film, the

French talk about a ‘version original’ (VO), while in German the similar term is “Originaltonband”.

Although in many ways a useful ‘shorthand’ concept, this notion of one ‘original’ behind each translation does not always apply. With manuals, for instance, the various versions available are often parallel versions loosely based on a template (which may never serve as a ‘real’ text) rather than translations of an original. When translating classical texts, including the Bible, several competing versions exist – either in the same language (as is the case with certain works of Shakespeare) or in a number of languages (cf. the Old and New Testaments).

It is probably no exaggeration to say that there exists no form of translation in which the notion of an ‘original version’ is completely sustainable. One often encounters cases where there is no genuine ‘original’, or where one man’s original is another man’s translation. In screen translation – from where the following examples are taken – this not only applies to language (“Which is the original language?”), but even to semiotics (“Which version should be considered the original?”).

One example of the latter phenomenon is found when a film subtitler must decide whether to translate from a script or directly from the soundtrack. In a chronological sense, the script represents the original (intention) of the film; as film dialog is written to be spoken. However, what really counts is what was recorded – and survived in the final version of the film – and what is now heard by the audience. Thus, whenever in doubt, the subtitler should follow the soundtrack, something which quite obviously is not always done.

The former phenomenon – that regarding which foreign language is the ‘original’ language – is often found in *bilingual* screen translation, common in countries with two or more major indigenous speech communities. Contrary to what might be expected by external observers, what we witness here is not two simultaneous translations of one original, but one translation of the original plus one translation of the other translation. In Israel, for instance, the one subtitled line in Arabic may be a translation of the other half of the subtitle block, i.e. the Hebrew subtitle, and in Latvia, the Russian subtitles are translated from – and even synchronized with – the (non-synchronous) Latvian voice-over, which acts as the de facto original, in lieu of the nearly inaudible ‘real’ foreign-language original.

#### 5.1.3.1. Multilingual originals

The phenomenon that original film dialogue increasingly spans several languages may have at least three reasons:

- the quest for authenticity, as sophisticated audiences no longer accept non-English characters – e.g. cold-war Russians – speaking (accented) English on screen. This trend became visible in mainstream Hollywood productions in 1990 when in the western “Dances with Wolves” the Sioux Indians spoke Lakota, meaning that the original American movie version displayed English subtitles whenever Lakota was spoken;
- the fact that due to recent immigration, a number of film-producing countries are turning multicultural and multilingual, with Germany as one example (Heiss 2004: 209); and
- the necessary step taken by many non-Anglophone countries to internationally co-produce films, in which ‘foreign’ locations and actors are often used. As a case in point, almost half of the Danish cinematic releases during the 1990s were co-productions, and many of them featured actors speaking other languages (typically Swedish, Norwegian and English). Accordingly, these films were screened with ‘original’ subtitles in cinema theaters, and later on DVD and TV (Brandstrup and Redvall 124-126).

Not allowing actors from various speech communities to perform in their mother tongue may have a disastrous impact on audience response to the film. An example of this is found when, in his report from the 2005 Montreal Film Festival, a Danish film critic said of the co-produced *The Headsman*: “the many different [English] accents in the film places it in a linguistic no-man’s land, which makes the entire setting and atmosphere of the film utterly unconvincing.” (Monggaard 2005: 24, my translation).

### 5.1.3.2 Relay translation

One final aspect worth mentioning in relation to the notion of originals in translation is *relay translation*. Down through history, translations from language A to language B have very often taken other paths than the straight line from A to B. Thus, several works by Shakespeare reached Danish and other audiences through French or German translations of the English originals, and – what is very often found today – translations from ‘minor’ into ‘major’ languages use ‘not so minor’ languages as relays. In fact, several English 19<sup>th</sup> century translations of the fairy tales of Hans Christian Andersen were translated from German versions of Andersen, rather than from the original Danish stories (Pedersen 2004:358).

Sometimes, the translation in the relay language (C) is not meant for the public in the C culture, but serves only as a pivot, or stepping stone on the way from A to B, hence the term *pivot translation*. Pivot translations, then, are relay translations whose only audience are translators; texts that are never meant to be end products, but merely props that enable translation from a language not (fully) comprehensible to the translator in question. (Grigaravičiūtė and Gottlieb 1999:46).

With film and television, the translator will normally work directly from the language A to language B. However, an increasing number of productions are translated via a relay version or a pivot script. Thus, in satellite-transmitted television in Scandinavia, the Swedish subtitle file often forms the basis of the Danish and Norwegian versions, and with cinema releases, film dialogue in ‘exotic’ languages is often subtitled by someone who does not speak those languages. This will inevitably lead to inconsistencies and downright mistakes in translation that would not have occurred in direct translation from the original version (ibid.:71 ff.).

## 5.2 Debatable common notions on screen translation

Though screen translation has already contributed to the discussion in the previous paragraphs, two ‘common truths’ specifically concerning screen translation will be scrutinized separately in the following paragraphs.

Notions	Counter-arguments
1) Semantic reduction cannot be avoided in subtitling	a) Viewers read faster than ever b) Writing is more concise than speech
2) Dubbing is not authentic	Dubbing represents semiotic equivalence

Tab. 6: Debatable Notions – Screen translation in particular

### 5.2.1 Does subtitling always imply reduction?

Elsewhere (Gottlieb 2005a:16), I have defined subtitling as:

- A. *Prepared* communication
- B. using *written* language
- C. acting as an *additive*
- D. and *synchronous* semiotic channel,
- E. as part of a *transient*
- F. and *polysemiotic* text.

As is clearly seen, reduction in verbal content, a much-cited feature of subtitling – whether intra- or interlingual – is not considered a defining factor. There are two reasons for this:

(a) The ‘demand’ for text volume reduction in subtitling is neither semiotically nor technically motivated, the only reason being that the reading speed of viewers is supposed to be slower than the (average) speech tempo in the original dialog. Although contemporary empirical data on audience perception is lacking, viewers in today’s subtitling communities are probably faster readers than earlier generations. This is already presupposed by commercial TV stations and parts of the DVD industry, where the long-established ‘six seconds-rule’ – displaying some 12 subtitle characters per second (cps) – has been raised to 16 cps, an increase of around 35%. With more than thirty percent more time for subtitle exposure, the semantic and stylistic content of most spoken lines could be accommodated on screen – a farewell to the usual (quantitative) reduction figures of 20-40% (Gottlieb 1994: 72 and Lomheim 1999: 191).

(b) Even without challenging the established presumptions concerning audience reading speed and film comprehension, the idea of not reducing the text volume in subtitling would be counterproductive to optimal audience comprehension – and result in poor translation. The point here is that a large part of the reduction (still found) in subtitling follows directly from its diasemiotic nature; the deletion or condensation of redundant oral features is a necessity when crossing over from speech to writing – a language mode more concise than oral discourse.

Interestingly, the intersemiotic redundancy (positive feedback from visuals and soundtrack) in subtitling often secures that the audience miss less of the film content than a merely linguistic analysis might indicate. Put differently: in a polysemiotic context, semantic voids are often intersemiotically filled. Subtitle reading can be compared to a cloze test, in which “le spectateur (...) accepte de reconstruire mentalement ces parties des conversations qui manquent, mais dont la présence est virtuelle.” (Tomaszkiewicz 1993: 267)

Still, among the oral features prone to condensation are also stylistically important ones like colloquialisms, slang, cursing, pragmatic particles and repetitions. It is obvious that the trimming of the discourse through the elimination of such propositionally redundant features not only leads to quantitative reductions; it is also instrumental in normalizing the text, by presenting the target-language audience with a version less non-standard than the original. In this way, the oft-mentioned time-and-space constraints of subtitling may serve as a convenient excuse for leaving out controversial or cumbersome elements of the original film dialog. In conclusion, this only goes to show how potentially dangerous the notion of reduction in subtitling is for translation quality.

### 5.2.1.1 A simple example of quantitative, but not qualitative, reduction

As stated above, the economical nature of written language often means that quantitative reduction in subtitling need not imply semantic, or qualitative, reduction. A textbook example of this fact was found in the subtitling of the British documentary *Man's Best Friend* (Channel Four, 2002), broadcast by the Danish public-service TV station DR1 (November 17, 2004) as *Mandens bedste ven*, subtitled by Peter Nørgaard.

Tab. 7 shows the verbal content of a short sequence from this broadcast. In the first part of the original narrated sequence, represented by the first subtitle block, the subtitler has used three techniques for shortening the text volume, two of which are sheer convention (numbers for polysyllabic numerals, and an abbreviation of an academic title), while the third is highly creative: an exclamation mark in brackets for the adjectival phrase ‘the improbably named’. Adding to this, the verb in the main clause (‘invented’, translated into ‘opfandt’), is moved from segment 2 to segment 1, in accordance with Danish syntactic rules. This obligatory need for syntactic reshuffling is reason enough for condensing subtitle 1, as the rhetorical pause between the two segments is (as is customary in Scandinavian subtitling) used as a segmentation point by the subtitler.

The entire sentence (In ... bigger) lasts 8.9 seconds, 5.5 seconds of which is spent on the first segment (equivalent to subtitle 1), with the remaining segment (subtitle 2) lasting 3.4 seconds. Thus, subtitle 1, representing a quantitative reduction of the original 76 characters by 32 percent, has an exposure rate of 9 cps. In comparison, subtitle 2, which – although freed of the main verb – still takes up 49 characters, is 4 percent longer than the original. Thus, the resulting exposure time for subtitle 2 is 14 cps, slightly faster than the established norms, but not as speedy as the previously mentioned ‘commercial’ standard of 16 cps.

English narration	Danish subtitles	Back-translation
In nineteen eighty-six, a surgeon in China, the improbably named Doctor Long,	I 1986 <b>opfandt</b> en kinesisk læge, dr. Long (!), –	In 1986 invented a Chinese physician, Dr. Long (!)
<b>invented</b> an operation to make dicks look bigger.	– en operation, der fik penis til at virke større.	an operation that made the penis seem bigger.

Text volume of initial segment	Number of characters
<b>Uncondensed translation:</b> I nitten hundrede og seksogfirs opfandt en kinesisk læge, doktor Long, –	72 (against 76 in the English original)
<b>Danish broadcast translation:</b> I 1986 opfandt en kinesisk læge, dr. Long (!), –	47 (reduced by 25 characters, a 35 % reduction)

Tab. 7: Quantitative reduction with no semantic losses

### **5.2.2 Dubbing is not authentic**

Since the introduction of sound films in the late 1920s, all methods of translation have been under fire, and subtitling was seen by many as a step back, now that voices could be heard in the cinema. Still more critics were skeptical toward dubbing, which was seen as basically unauthentic. And to this day, most foreign-film aficionados have been strongly in favor of subtitling when forced to choose between the translation methods available. A key issue to those fascinated by subtitling – especially people based in major speech communities rarely exposed to foreign-language imports – is the additive nature of subtitling, giving viewers total access to the exotic original while being semantically safeguarded by captions in the domestic language. This thrilling experience, almost like watching dangerous animals from behind an armored glass screen in the zoo, is shared by many in the film industry. As expressed by Canadian film director Atom Egoyan: “Subtitles offer a way into worlds outside of ourselves. Subtitles embed us” (Egoyan and Balfour 2004:30).

Paradoxically, from a semiotic point of view, subtitling – although retaining the original soundtrack and thus creating a more authentic impression than dubbing – is less authentic than dubbing. Subtitling constitutes a fundamental break with the semiotic structure of sound film by re-introducing the translation mode of the silent movies, i.e. written signs, as an additional semiotic layer. Technically speaking, subtitling is a supplementary mode of translation.

Dubbing, on the other hand, represents a substitutional mode and is thus the only semiotically equivalent form of screen translation. (Its underdog competitor, voice-over, places itself between two stools by layering the revoiced soundtrack on top of the original dialog track).

Especially within the target-culture acceptability paradigm (although criticized above, this is still a defensible approach to certain types of translation) dubbing gets the upper hand by bravely trying to recreate the authentic cinematic (sound film) experience. And as surveys have shown (Kilborn 1993), major parts of the audience in dubbing countries – especially TV viewers – are happy with what they hear. Many non-English speaking viewers of American sitcoms, for instance, do not even realize that they are being manipulated by their local dubbing industry. The notion that it is impossible to recreate a filmic illusion in foreign minds is an illusion itself.

If dubbing did not work, why would TV stations spend so much money on post-synchronizing programs when they could have them subtitled for about one tenth of the price?

To be sure, the only semiotically 100 percent authentic type of screen translation would imply that one should not only alter the soundtrack in order to keep the semiotic balance, but also recreate all semiotic tracks of the original production. The result, a total remake, would only be recognized as a sort of translation by those who know the original production and speak the language used in it – not enough people to shatter the illusion of dealing with an original production.

## **6 Translation types compared**

This final section of the paper will present a juxtaposition of nine types of translation, including the three dominant methods of screen translation: subtitling, dubbing and voice-over. Following the semiotically-oriented comparison, the discussion will conclude by comparing six of the types analyzed with regard to a number of esthetic, linguistic and cultural parameters, in order to ascertain the diverse media-political implications of the various types of translation, and – in particular – the implications of the national preferences of screen translation method(s).

## **6.1 The stuff that texts are made of: Semiotics in translations**

In Tab. 8, various emblematic types of translation – all of them stamping their mark on the language communities in which they are common and favored, are compared. As parameters for this comparison I have used the five defining features of subtitling (listed in section 5.2.1).

The second column lists – for each type – the translational category in which it belongs, as stipulated in the taxonomy in tables 1 and 2.

The ‘ambiguous’ notation for voice-over in the third column indicates that this type of revoicing is sometimes made on the spot.

The void signs (Ø) in the third column from the right illustrate that the designation ‘synchronous’ is neither relevant to drama nor to literary translations. Both are presented to the public without any temporal links to the original works.

Finally, polysemiotic types in which one semiotic channel carries less than 5% of the semantic load (cf. Tab. 4) are considered to operate without that channel.

## **6.2 What translations do to people: Audience benefits of selected types**

Where Tab. 8 used pluses and minuses to indicate whether a certain requirement was fulfilled or not, Tab. 9 uses zeros and stars (asterisks, to be exact), as we are no longer dealing with binary oppositions, but rather with degrees on a cline between two extremes.

The zero sign (0) indicates total lack of the quality relevant to the particular column, while four stars represents the optimum. As a case in point, on affordability – a quite central parameter in the translation business – dubbing is rated a two-star enterprise, while its two rivals are handed four stars each. With dubbing ten times more costly than both subtitling and voice-over, one might find two stars a bit too kind; the reason, of course, is that domestic productions (whether remakes or original programs) are even more expensive: hence the single star in that cell.

As in the previous table, the void sign (Ø) indicates irrelevance. In this table it only appears once (in the foreign-culture mediation column) as an illustration of the futility in trying to estimate how ‘foreign’ a domestic program is likely to be. Naturally, some TV genres tend to be almost claustrofobically local, while other programs (documentaries, for instance) may contain more ‘exotic’ content than found in certain imports.

With these introductory remarks, I hope the tables will tell their tale of likenesses and differences, of assets and deficits of the selected specimens of the vast reservoir of translations that surround us.

<b>Translation type</b>	<b>Semiotic categorization</b>	<b>Prepared</b>	<b>Written</b>	<b>Additive</b>	<b>Synchro- nous</b>	<b>Tran- sient</b>	<b>Poly- semiotic</b>
'Normal' subtitling	Cell 24: Conventional, interlingual and diasemiotic	+	+	+	+	+	+ (4 channels)
Subtitling for the deaf	Cell 30: Conventional, intra-lingual and hyposemiotic	+	+	-	+	+	+ (2 channels)
Live subtitling for the deaf	Cell 30: Conventional, intra-lingual and hyposemiotic	-	+	-	-	+	+ (2 channels)
Voice-over	Cell 30: Conventional, interlingual and isosemiotic	+ / -	-	(-)	-	+	+ (3 channels)
Dubbing	Cell 23: Conventional, interlingual and isosemiotic	+	-	-	+	+	+ (3 channels)
Audio description	Cell 9: Inspirational, verbalizing and hyposemiotic	+	-	-	-	+	+ (2 channels)
Drama translation	Cell 23: Conventional, interlingual and isosemiotic	+	-	-	∅	+	+ (3 channels)
Literary translation	Cell 23: Conventional, interlingual and isosemiotic	+	+	-	∅	-	- (1 channel)
Simultaneous interpreting	Cell 26: Conventional, interlingual and hyposemiotic	-	-	-	-	+	- (1 channel)

*Tab. 8: Translation methods I: Semiotic qualities (intended audiences)*

Type of production	Affordability	Semiotic authenticity	Dialogue authenticity	Content mediation	Access to original	Foreign-culture mediation	Foreign-language training	Literacy training	Domestic-language boosting	Linguistic integrity (no trans-lationese)
Dubbed TV	**	***	0	****	*	**	0	0	***	*
Subtitled TV	****	*	****	**	****	****	****	***	**	**
Voiced-over TV	****	**	*	***	**	**	*	0	**	***
Domestic TV productions	*	****	****	****	****	∅	0	0	****	****
Translated drama	**	****	***	***	*	*	0	0	****	***
Book translations	**	****	***	****	*	***	0	****	***	***
Simultaneous interpreting	***	***	*	***	***	**	0	0	****	***

*Tab. 9: Translation methods II: Media-political qualities (general audiences)*

### 6.3 Translation methods, merits and national preferences

As is clearly shown in Tab. 9, the type of translation chosen may be just as important as what texts we are dealing with or what 'strategies' translators tend to choose. To circumscribe Marshall McLuhan: "the medium of translation is the message". This is true whether we look at audience-selected types of translation (as when someone prefers a translated novel instead of a subtitled screen adaptation) or consider situations where the choice of translation method has already been made by text providers (TV stations, etc.) as when, for instance, subtitling is preferred to voice-over in broadcasting a foreign comedy series.

I will refrain from discussing the contents and implications of the individual cells in the table – let alone draw any bombastic conclusions on the relative merits of the various types of translation represented here. Instead of, for instance, choreographing a final showdown between the three dominant (interlingual) screen translation methods, I will test whether the data in Tab. 9 will explain why all three methods are still very popular in their home constituencies.

In Europe, little has changed in the past decades as regards preferences in TV translation methods: although subtitling has gained ground in former voice-over territory (e.g. Estonia), and dubbing may have cemented its status in some major speech communities (especially Great Britain), roughly speaking, the situation is still as it was during the Cold War:

- 1) Western European speech communities with less than 25 million inhabitants prefer subtitling on TV. (from Iceland to Finland, and from Portugal to Greece, dubbing is only found in broadcasts for children.)
- 2) Western European major speech communities dub all foreign programs. (England, Spain, France, Germany and Italy never subtitle TV programs).
- 3) Eastern European speech communities are divided, with

- some countries (e.g. Slovenia, Croatia and Romania) preferring subtitles,
- others (e.g. the Czech Republic and Hungary) favoring dubbing, and
- yet others, including Latvia, Lithuania and Russia are in favor of voice-over.

### **6.3.1 The advantages of voice-over**

Based on the data in Tab. 9, it is fair to say that voice-over, the poor cousin of (lip-sync) dubbing, comes out as the winner of the two revoicing competitors not only in terms of affordability, but also when it comes to retaining some of the original flavor (cf. the 'access to original' quality) and – especially important from a puristic point of view, predominant in for instance Lithuania – with regard to linguistic integrity. Voice-over being non-synchronous (cf. Tab. 8), it neither has the need to emulate foreign (mostly English) syntax and lexis on local lips, nor does it allow the audience to follow the original dialogue and thus exert foreign influence that way.

### **6.3.2 The attractions of subtitling**

Whenever affordability, dialog authenticity, acquisition of foreign-language and reading skills are prioritized in audiovisual translation, subtitling is the obvious solution. Historically, what began as an economic necessity in minor European speech communities during the Depression in the early 1930s soon became a linguistic virtue, and there is no doubt that especially the knowledge of foreign languages has been boosted in the subtitling countries (cf. Gottlieb 2004). Thus, subtitling seems to be a sensible choice in relatively small countries, in which knowledge of foreign cultures is a basic condition for survival – as opposed to larger nations, which tend to be more culturally self-sufficient, in both senses of the word.

### **6.3.3 The assets of dubbing**

When money is not the option, and broadcasters emphasize semiotic authenticity, boosting of the domestic language and smooth content mediation (in other words: viewer-friendly and localized versions of foreign productions), dubbing is the undisputed choice. As a covert form of translation, dubbing strikes a comfortable balance between presenting foreign (TV) genres and interestingly 'exotic' settings and at the same time ridding viewers of two subtitling evils: listening to incomprehensible dialogue and having to read while trying to enjoy the action onscreen.

## **6.4 Linguistic integrity in translation**

In this final paragraph, I will briefly discuss the question of linguistic integrity in translation, this time comparing the three screen methods with drama translation, literary translation and simultaneous interpreting.

As is signaled in Tab. 9, what is hinted at with the term 'linguistic integrity' is the likeliness than a given type of (interlingual) translation will yield verbal discourse which is idiomatic and thus not prone to displaying features from the source language. In other words, types of translation which tend to contain many instances of translationese – these days typically Anglicisms, including calques, semantic loans, preference for English lookalikes, etc. (Gottlieb 2005b) – will obtain low scores in the far-right column of that table.

It may come as a surprise that the two dominant screen translation types score lower than both voice-over and their 'off screen' counterparts. To a large extent this is due to the immediacy of film and TV. The earlier-mentioned media-specific constraints of subtitling (the audible dialogue, forcing translators not to alienate their bilingual readers by straying too far

from the original syntax) and dubbing (the demands of lip-synchrony in close-ups) both produce a considerable number of features of translationese – in casu Anglicisms. (Herbst 1994; Gottlieb 1999 and 2001).

As mentioned above, the non-synchronous nature of voice-over is what maintains its relatively high linguistic integrity, thus placing it on a par with simultaneous interpreting (in which the interpreter has considerable freedom as regards the linguistic expression) as well as literary and drama translation. However, no type of translation obtains maximum points in this column, which reflects the fact revealed by several studies that even printed translations display several traits of translationese. (Gellerstam 1986 and Tirkkonen-Condit 2002).

While the linguistic integrity of both written and oral monosemiotic translation may be somewhat higher than that of the polysemitic types dubbing and subtitling, monosemiotic translation – represented in the tables by literary translation and simultaneous interpreting – display extremely high degrees of translational freedom. In doing so, the semiotic nature of these translation types makes it possible for translators to take great liberties with text content and style (cf. the low scores in the 'access to original' column). Whether translators choose to do so is a matter of personal integrity, something which is not the issue here – but certainly a topic deserving scholarly attention.

## 7 Conclusion: the human factor in translation

This paper has focused on the multi-faceted nature of translation, and on the plethora of translational types, all defined, discussed and compared against a semiotic backdrop. What has been addressed just in passing is the human factor. Although the notion of translational strategies, a well-established one in Translation Studies, was criticized for lending itself to conceptions of translators as near-omniscient beings consciously selecting solutions to translational conundrums, the role of the translator *is* central. The measurable importance of semiotic structures notwithstanding, the style and talents of the individual translator will always play a key role in shaping the translated text. With regard to inspirational translation, this is a matter of course, but even within conventionalized translation, this remains a fact.

As a case in point, a major empirical study on how various (national) language versions, dubbed and/or subtitled, dealt with punning concluded that "apart from the characteristics of the source-text sequence, the individual translator and his or her specific choices are the most decisive factor in the translation of language-play in film." (Schröter 2005: 367).

It is still my hope that with this paper I have contributed to refining the terminology and widening the conceptual framework of Translation Studies in a time in which humans increasingly communicate within highly complex semiotic structures.

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## Surtitles and Translation

### Towards an Integrative View of Theater Translation

#### Contents

- 1 Introduction
- 2 Theater Translation (TT)
- 3 Surtitling
- 4 Are surtitles an adequate mode of translation?
- 5 Concluding Remarks and Outlook
- 6 References

#### Abstract

Theater translation (TT)<sup>1</sup> is realized by way of surtitling, simultaneous interpreting, summarizing translation and other modes of translation. It does not appear as a research topic in the literature before Griesel (2000). Its object is to investigate different ways of interlingual transfer characterized by the fact that the boundaries between interpreting and translation are blurred. In contrast to drama translation, the production as a whole constitutes the 'source text'. It has a multidimensional dimension in that translation modes are blurred and in that the target text may be presented in both written and/or oral form. The article will present an outline of the research area of TT and shows how it constitutes an autonomous area of research that deserves to be treated independently of drama translation, subtitling and surtitling in the opera. From a translational point of view it is interesting because it combines and integrates different modes of translation.

This paper will discuss the possibilities of an adequate transfer of a French-speaking production by means of surtitles without destroying the complex semiotic structure of the theatrical work of art. It will also show the limits of surtitling in the theater and the need to consider theater translation as a whole in order to produce adequate target texts.

TT may be provided by surtitles, simultaneous interpreting, written synopses or other, alternative forms and thus falls within the framework of multidimensional translation.

## 1 Introduction

This article explores the following questions:

1. Is it possible - using surtitles - to transfer a French-language production adequately into German without destroying the complex semiotic structure<sup>2</sup> of the theatrical performance?
2. Where are the limits of surtitling in the theater ?
3. Why it is essential to consider theater translation as a whole, in order to produce an adequate<sup>3</sup> target text?

I begin by briefly sketching what TT is, then take a closer look at surtitling and its specifics, using a few examples to illustrate how they are made up, and finally turn to the central

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<sup>1</sup> The following article and terminology is based on Griesel (2000: 13)

<sup>2</sup> Fischer-Lichte (1998: 27-28)

<sup>3</sup> I use the word in the sense proposed by Reiß (1995: 107ff.).

question of whether surtitles are an adequate method of translation for foreign-language theatrical productions. I will make my arguments more explicit by means of presenting a TT model and will close with a summary.

## 2 Theater Translation (TT)

Research on TT began in 2000 and refers to the oral and written translation of foreign language theatrical productions to be shown to audiences of different languages. This form of translation can be found mainly at international theater festivals such as those held in Avignon, Edinburgh or Vienna<sup>4</sup>.

Within TT, the 'source text' is the production as a whole which needs to be taken into account when translating. One of the distinctive features of TT is that it is experienced only once at a particular moment and time.

The translation process involves translation outside of the specific theatrical performance in that translations are inserted into surtitle lists, taken into the interpreter's booth or distributed to the audience as synopses<sup>5</sup>.

What is specific to TT is that the source text is the performance rather than the written text of the drama. Thus the problems involved are quite different to those of a translation of a play or a literary text. The performance takes place within a limited temporal framework. Theater translation depends on the given situative context, and has much in common with the interpreting process. The translation of a specific production must function within the allotted temporal framework.

When a foreign-language production comes to the stage, whether as part of a festival or a guest performance, a translation process is necessary if the play is strongly text-based. This process can occur in several ways, including:

1. A summarizing translation: Before the performance, the audience receives a written synopsis of the play and watches the play without further translation.
2. Surtitles: Surtitles present text passages in a condensed, translated form and are manually projected onto the stage.
3. Simultaneous interpretation: The audience is provided with headphones and listens to a simultaneous live interpreting during the performance.

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<sup>4</sup> This very new field of research has only attracted attention in the past ten years. It is a rapidly changing field because of technological advances and is becoming increasingly important with the number of international festivals increasing in the past ten years (cf. the annual festival calendar in the *theaterheute* issues between 1995- 2005, nos. 5 and 6).

<sup>5</sup> A summarizing translation of a foreign-language production is comparable to an abstract. (according to Oldenburg's definition "abstracts should be 'autonomous', i.e., comprehensible without any knowledge of the reference text" (1992: 77). Cf. also the German National Standards Organisation (DIN): "The abstract provides a brief and clear account of the contents of a document. It should be informative without interpreting or evaluating... and understandable without the original". (DIN 1426: 2) The term 'abstract' can only be used for the ideal-typical form of a summarizing translation, some examples, (the synopsis of the production **Oh les beaux jours** by Peter Brook) deviate from the definition of an abstract to the extent that they offer additional explanations and interpretations, and thus are better categorized as "summaries that make arguments and draw conclusions" (see Oldenburg 1992: 105). The translation must be kept short enough for the audience to be able to read it before the performance, either in total, or at least parts of it, e.g. the text up to the interval.-Translations in the form of abstracts are very inexpensive, and frequently used options in foreign-language productions. There are various types of summarizing translation – shorter, longer, in book or booklet form or as a simple A 4 sheet'. (cf. Griesel 2000:44).

4. Alternative forms: for example, a translator integrated into the performance interprets, or the TT is rendered by other, experimental means of translation on the stage.

This list does not claim to be exhaustive but is based on observations during the years 1995 to 2005 (cf. Griesel, 2000: 13). Currently, surtitling is the dominant mode of TT and it is increasingly gaining in popularity.

### 3 Surtitling

Surtitling in the theater is surely not an everyday phenomenon. Its complexity makes it an extremely interesting field of research and makes it an appropriate touchstone for translational insights.

Theatrical productions are transitory and in order to judge a translation, one needs to take notes during the individual performance<sup>6</sup>. Since the lighting often makes it impossible to film the events on stage and render the surtitles in visible form, it is frequently necessary to painfully piece together a source text<sup>7</sup> of notes taken during the performance and from memory as well as from surtitle lists and books. Thanks to digital technology, I was able to record five French-language performances in such a way that I was able to analyze the entire source text.

Since decisions for or against various means of transmission often follows highly subjective criteria, I have tried to objectivize surtitling by assembling a diachronic corpus that incorporates the development of surtitling over the past decade on the one hand and that takes into consideration the complexity of the texts on the other hand. I consider both classical and contemporary plays, which I have attempted to organize into a typology.

As the model in Figure 1 illustrates, also included in the analysis are the translated dramas, which exist on the reference level as part of the source text.

The model applies to the language pair French – German on three levels. On the one hand, we have the German surtitles, which are visible to the audience, and on the other the performance level, on which the French-language productions are watched and heard. I have distinguished between four types of texts:

1. the canonical original dramatic text (ODT)
2. the non-canonical original dramatic text (ODT)
3. the canonical translation of the drama (DT)
4. the non-canonical translation of the drama (DT)

These categories do not claim to be comprehensive. The open arrows indicate further possibilities. The analysis of my corpus<sup>8</sup> revealed that such a differentiation is necessary for TT, because it entails various translation approaches. This can be noticed on the reference level, which contains texts that either enter the surtitles directly or play a decisive role in the process.

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<sup>6</sup> The problems of note-taking in TT hardly differ from those used in analyses of performances in the field of theater studies (cf. Fischer-Lichte 1999: 112ff.). Sometimes there is even less willingness to co-operate when it comes to TT, since surtitling is regarded as a rather unimportant part of the production and its treatment is thus considered superfluous.

<sup>7</sup> I use the term 'source text' to refer not just to the entire production as a semiotic unit as defined by Fischer-Lichte (1998:27-28), but rather to "any more or less clearly distinguishable and interpretable quantity of signs that serve as the basis of information for a translation" (Prunč 2003: 29), which includes the translated dramas existing on the level of reference.

<sup>8</sup> I analysed eight French-language, German subtitled performances from the period between 1996 and 2004, and the distinction between these four types of text proved useful (cf. Griesel 2000).

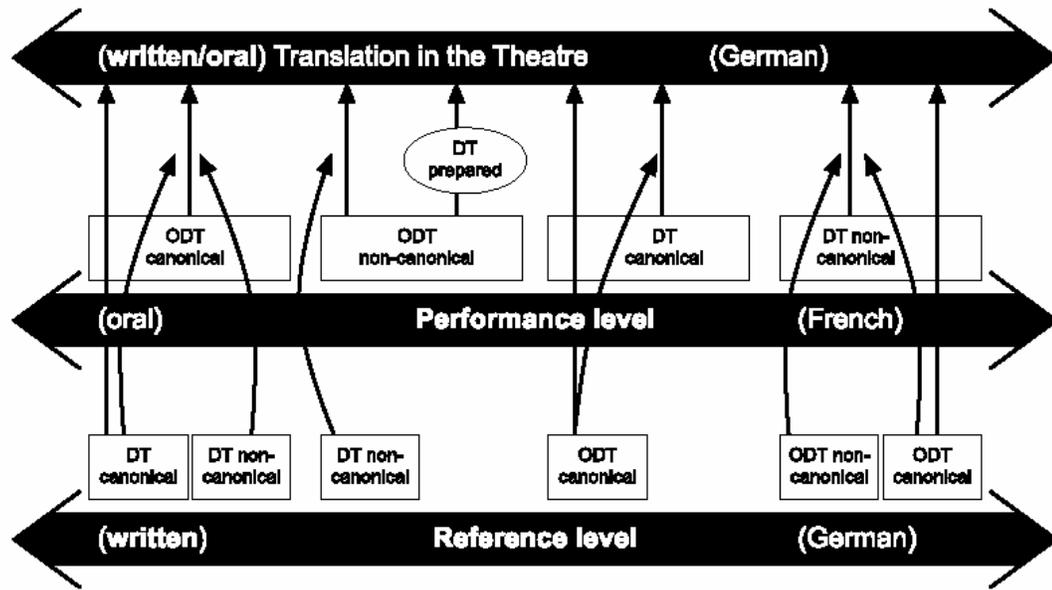


Figure 1: Reference Level influences on TT

A few examples may serve to illustrate the model. An original text has the greatest weight on the reference level. This means that when, for example, a French translation of a German play, whether by Goethe, Brecht or in my case by Grabbe, is performed in Germany, the original German text appears again in the surtitles and resists any compression. The following example from Bernard Sobel's production of *Napoléon ou les Cent Jours*, performed on 26 September 1996 at the *Hebbel Theater* in Berlin, and subtitled by Caroline Elias, underlines this clearly.

Surtitle	Stage text	Original drama
- Die Stimme kenn' ich von den Pyramiden her. Mein Hauptmann, seit Ägypten sah ich ihn nicht.	<i>Cette voix – je la connais depuis les Pyramides, quand nous plantions notre drapeau, le tricolore, tout en haut des minarets du Caire, et qu'à nos pieds le Nil roulait ses flots. Mon capitaine, je ne t'ai pas vu depuis l'Égypte.</i>	Die Stimme kenn' ich von den Pyramiden her, als wir da unser Trikolour hoch über Kairos Minarets aufpflanzten, und der Nil zu unsern Füßen rollte. - Mein Hauptmann, seit Ägypten sah' ich dich nicht.

A very high value is placed on the 'sacred original', which remains intact. In the case of original dramatic texts, such as *L'Avare*, which have become part of the international canon, a recognized translation, which sometimes attains a virtually 'sacred' status too, exists on the reference level. One need only think of the German Shakespeare translations by Schlegel and Tieck. Nevertheless, the reference level is treated more freely, as we can see from the analysis of Roger Planchon's production of *L'Avare*, which was staged at the *Deutsches Theater* on 20 June, 1999, with the surtitles by Michel Bataillon based on a translation by Christel Gersch.

Surtitle	Stage text	Reference level
Aber ich bin nicht sicher, daß die anderen meine Gefühle teilen werden.	<i>mais ce n'est pas assez peut-être pour le justifier aux autres, et je ne suis pas sûre qu'on entre dans mes sentiments.</i>	aber vielleicht genügt es nicht, mich vor den anderen freizusprechen; ich bin nicht sicher, daß sie meine Gefühle teilen werden.

The sentence structure is largely maintained, but with interventions: the first clause is removed, but the words *aber* (but) and *die anderen* (the others) are used in the second part. The intervention is minor, but a somewhat more liberal handling of the text on the reference level is evident. Far greater changes are made to texts for which no well-known, let alone canonical, German translation exists. An example is Peter Brook's production of *Le Costume*, which was performed in Berlin in 2000 with surtitles by Uli Menke based on the translation by Isolde Schmitt.

Surtitle	Stage text	Reference level
Philemon ging zur Post,	<i>Philemon alla à la poste de Sophiatown,</i>	Philemon ging zur Post <b>in Sophiatown,</b>
die zwischen Sophiatown und der Stadt der Weißen liegt.	<i>qui se situe exactement entre Sophiatown et la ville des blancs de Westdene.</i>	die genau zwischen Sophiatown und der Stadt der Weissen in <b>Westdene</b> liegt.

As we can see, the surtitler adopted the basic structure, but condensed the content within the sentence structures.

The form that most closely resembles film subtitles is that used for the French-language play *Le Colonel des Zouaves*, of which no German translation exists, and which was presented to the German theater public for the first time in the form of surtitles. Note that in order to further shorten the titles, the adjectives are frequently removed.

Sutitles	text on stage
Der Tunnel mündet vor einer Tudorfassade aus fast grauem Stein,	Après d'innombrables tournants, le tunnel obscur débouche sur une façade Tudor en briques presque grises,
vollgestopft mit wappengeschmückten Fenstern.	boursoufflées de verrières élisabéthaines à vitraux armoriés.

Similarly, adjectives are absorbed by nouns when the information provided by the adjective appears redundant.

I mention this instance to emphasize how important it is to distinguish between different types of theatrical texts, and to underline the central significance of the reference level in this context. One can easily imagine the difficulties a surtitler may have when transforming Goethe's *Faust* into surtitles. An example from the surtitling of the so-called *Urfaust*, however, illustrates the existence of more positive options. At the *Goethe Festival* in Munich in 1999, Ms Spinazzi surtitled a French-language *Faust* with "Hier steh ich nun ... " ("Now here I stand", from Faust's first soliloquy in the play) and simply had Faust continue without further surtitles, since the German-speaking audience could supply the rest themselves.

We must also consider another peculiarity of theater translation, namely, that all forms of transmission are additive forms of translation, which extend the source text by the dimension of translation. The audience is also divided into different groups; the circle of

recipients include native speakers of the target language and of the source language as well as target-language (TL) speakers with a knowledge of the source language (SL)<sup>9</sup>.



This means that between the stage and one segment of the audience, communication is monolingual, while between the stage and the second part of the audience, communication is bilingually mediated. For the third segment of the audience, communication is monolingual, aided by bilingually mediated communication. The peculiarity of theater translation is that these three modes of communication must occur parallel to each other, that is, at the same time and place, and overtly. Thus, the target text is perceived differently,

- either as a source text without translation,
- with occasional reception of the translation
- or as a complete target text, of which the target language segment is the integral component.

#### 4 Are surtitles an adequate mode of translation?

My reflections have centered around the question of whether surtitles are an adequate means of transmitting a production into German, a question which was passionately discussed during all guest performances with other forms of theater translation also tending to be supported or rejected on the basis of rather subjective arguments. My intention was to tone down the heated debate by introducing some objectivity and the results of my research have hopefully provided some food for thought in that they have shown that theater translation is a complex translation process, which can be assessed using objective criteria, and which does not have to rely on subjective reactions by individuals.

Surtitling is a possible, and currently the most common, mode of transmission for guest performances. The study has shown first of all that this complex translation process involves two phases of production: a translation phase and an interpreting phase. The suggested model shows that in order to do justice to the complexity of the surtitling process, we must regard it as 'text design'<sup>10</sup> as Fig. 2 shows.

The model represents the surtitling process using the action-theoretical approach<sup>11</sup>, and consequently the translation process begins with the commissioning of surtitles. Those who commission surtitles, e.g. festival organisers, address the translation issue after inviting the foreign language productions, and assign the task to a translator.

The translator produces a written translation of the source text. Interestingly enough, a prototypical source text<sup>12</sup> is used here. The term 'prototypical source text' refers to a videotape of a specific performance of the production. It may be very similar to the performance to be subtitled, but it may also be rendered quite differently by improvisation, errors, cast changes, etc.

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<sup>9</sup> For a more detailed discussion see 'Die Inszenierung als Translat. Möglichkeiten und Grenzen der Theaterübertitelung' (Griesel 2007).

<sup>10</sup> This term was coined by Holz-Mänttari 1993.

<sup>11</sup> As proposed by Holz-Mänttari in 1984, cf. also 1986.

<sup>12</sup> With this terminology, I do not refer to prototype semantics, but to a source text that serves as a model for the subsequent translation.

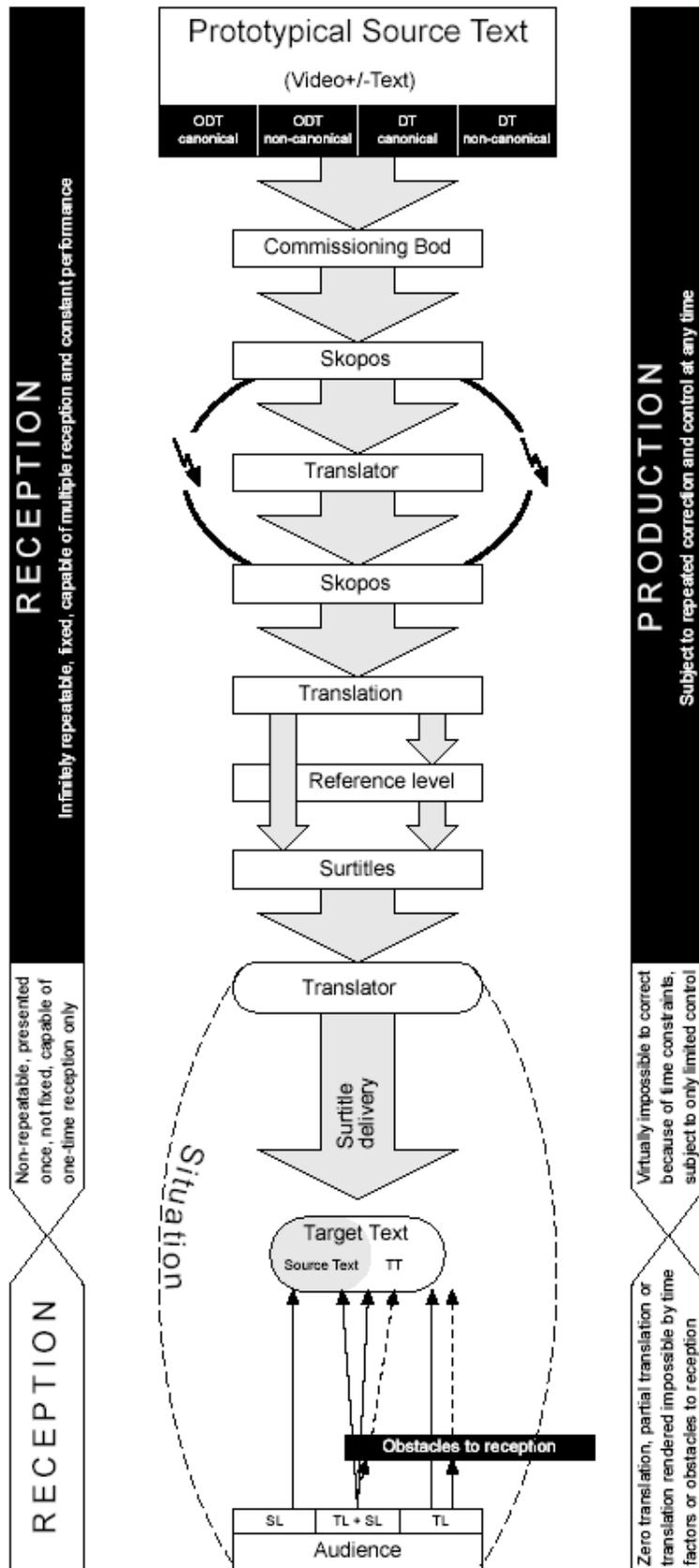


Fig. 2: Theater Translation (TT) Model

Thus, at this stage, the translation process can only approximate the source text of the concrete performance. During surtitling, this pre-existing written translation can only be changed to a very limited extent<sup>13</sup>.

The model represents the surtitling process using the action-theoretical approach<sup>14</sup>, and consequently the translation process begins with the commissioning of surtitles. Those who commission surtitles, e.g. festival organisers, address the translation issue after inviting the foreign language productions, and assign the task to a translator.

The translator produces a written translation of the source text. Interestingly enough, a prototypical source text<sup>15</sup> is used here. The term 'prototypical source text' refers to a videotape of a specific performance of the production. It may be very similar to the performance to be subtitled, but it may also be rendered quite differently by improvisation, errors, cast changes, etc. Thus, at this stage, the translation process can only approximate the source text of the concrete performance. During surtitling, this pre-existing written translation can only be changed to a very limited extent<sup>16</sup>.

The commissioning body decides, sometimes in conjunction with the director, what mode of translation is to be used and thus – in a certain way - establish a *skopos*. For example, they determine which translation to use on the reference level, the degree of abridgement, the possibilities for deletion or condensation, and the like. The translators then prepare surtitles in the target language and specify the *skopos* based on their experience– for example, introduce a higher degree of abridgement, use complete sentence structures within the individual surtitles to ease understanding and reception, etc. It becomes evident here that TT generally operates in a field of tension, encompassing various dichotomies, such as literary versus functional quality, written versus oral, optical versus acoustic reception, etc. The *skopoi* may at times be contradictory and incompatible, and this irreconcilability can prevent an adequate translation. If the *skopoi* are not irreconcilable, the translator's only option may be to refuse the surtitling commission<sup>17</sup>.

The translation that takes place within the specified *skopos* is often similar to an interpreting process, which is highly dependent upon situative factors, but must also rely on previously prepared elements. The reception corresponds to the reception of simultaneous interpreting; it is unique, unrepeatable and exists solely within a prescribed temporal framework<sup>18</sup>. The translation prepared during the initial *skopos* phase is inserted manually to parallel the source text. The surtitlers thus hear the source text acoustically and insert the prepared written elements in the target text optically. In order to do so, they naturally need a firm grasp of both languages. Since changes during this process, as was mentioned above, are almost impossible within the performance setting, the quality of the translation depends heavily on situative factors.

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<sup>13</sup> The possibilities for changing the order or text of the surtitles during the performance depend strongly on which surtitling software is used. A number of different programs are currently in use, from simple PowerPoint to the Torticoli program recently developed in Avignon especially for the theater, which allows for new surtitles to be added during the performance.

<sup>14</sup> As proposed by Holz-Mänttari in 1984, cf. also 1986.

<sup>15</sup> With this terminology, I do not refer to prototype semantics, but to a source text that serves as a model for the subsequent translation.

<sup>16</sup> The possibilities for changing the order or text of the surtitles during the performance depend strongly on which surtitling software is used. A number of different programs are currently in use, from simple PowerPoint to the Torticoli program recently developed in Avignon especially for the theater, which allows for new surtitles to be added during the performance.

<sup>17</sup> Naturally, when looking at the decision not to translate, which is generally a last resort, one must always keep in mind that financial aspects play a key role in sometimes influencing translators' actions.

<sup>18</sup> The definition of interpreting and translation is based on that of Kade (1968:35), which remains authoritative.

The example that follows<sup>19</sup>, is taken from the production of *Les Nouvelles du Plateau S*<sup>20</sup> and shows clearly that the two phases of the surtitling process described above are interrelated and therefore cannot be considered in isolation from each other.

11.30					11.36
<i>C'est bien pourtant il y a du suspense. C'est idiot. Bonjour. Aah, salut.</i>					
Das ist spannender. - Das ist bescheuert					

11.37					11.44
Eine Freundin. - Aha.					
Sie ist heute gekommen und bleibt etwas im Hotel.					

As becomes evident here, the particular difficulty is that the surtitles continue to be delivered in the programmed order. If the actors skip a line or a whole passage, the target text no longer corresponds to the source text. This is especially striking when, as in this case, the optical part is still visible after the source text can no longer be heard, or vice versa. I chose this production as an example to show what can happen even if the surtitles are, on the whole, very good, and were prepared and delivered by a very experienced surtitler<sup>21</sup>. This is no isolated incident. According to my observations, such irregularities occur nearly every time surtitles are used. The following quotation from the press review of the theater festival *Theater der Welt* in 1999 comments on this phenomenon with a sense of humor.

The most subtly amusing moment came from a technical slip-up, when the surtitles came to a standstill after about two hours. 'We are all vain and useless. I, too, shall remain seated' could be read for several minutes, while on the stage the actors leapt, screwed and screeched quite incomprehensibly. Up to the meta-level with surtitling: Now that's deconstruction. (Kühl 1999:14)

Thus in order to evaluate the overall transmission process, one must take into account that surtitling is neither an interpreting nor a translation process, but rather a hybrid form<sup>22</sup>.

Various other obstacles to reception can also play an important role in TT, to the extent of producing an unintentional zero-translation (Prunč 1997: 37). I refer to such problems as projecting the surtitles too high. In the case of *Les Nouvelles du Plateau S*, surtitles were invisible from the first circle, since they were obscured by a photo frieze belonging to the scenery, only people in the stalls could read them. This was wholly unintentional, however, and the audience was not informed in advance, so that the German speakers sitting in the first circle could not understand the play. Obstacles of this kind are very frequent in theater surtitling, whether the cause is poor lighting, technical failure or something else. Once again, a quotation from the press review from the 1999 *Theater der Welt* festival nicely puts such matters in words:

The charm of the foreign language, too, soon palls. And the mouse wandering hysterically across the screen with the surtitles, which keeps clicking onto the wrong text files, and finally no longer clicks anything at all, does not exactly help to save the evening. (Ammicht 1999: 19)

<sup>19</sup> The tables are organised in such a way that the first line represents the time precisely, down to the second. The second line is the text heard on stage, as temporally precise as possible, and the third line indicates the standing times of the German surtitles.

<sup>20</sup> Laurant Gutmann (Théâtre National de Strasbourg): 'Nouvelles du Plateau S'. 'Perspectives' 2004. Performance: Centre Dramatique de Thionville-Lorraine, Thionville. 26 May 2004.

<sup>21</sup> In general, any analysis in this area must take into account that all of the translations at my disposal can be assumed to have been far better than average, since only good surtitlers would allow their surtitles to be recorded.

<sup>22</sup> I have consciously expanded the definition of translation here to include a third category, since TT involves a mixture of the two categories of (oral) interpreting and (written) translation. (Griesel 2007)

The reception of the surtitles, as the diagram clearly shows, corresponds to simultaneous interpreting with target text production in a written form. The reception of the target text implies different requirements. First, we have the presentation of the target text, which as a surtitle borrows heavily from subtitles. It has become apparent, however, that the results already obtained with subtitling have been applied only intuitively to surtitling in the theater. Minimum projection times are generally maintained, while maximum projection times and the removal of the individual titles are unknown in surtitling. This naturally renders reception far more difficult, sometimes even preventing it, or forces the audience to decide for or against one or more theatrical or translatory signs. A greater awareness of these obstacles to reception could lead to serious improvements in surtitling.

The other point that has emerged is that TT treats different types of texts quite differently. First of all, the reference level contains existing canonical dramas or drama translations and plays a key role in TT. My findings have clearly shown that a German original text performed in French translation, which reappears in its source language in the surtitles enjoys the highest authority. It is treated as a so-called sacred text, and the translator does not dare to make serious interventions in the textual structure, so as not to change the style and language of the original. Since it has become evident, however, that older, classic dramas in particular frequently need to be shortened by more than one-third to ease reception, interventions in the textual structure are necessary. And these plays are generally abridged by removing sentences and phrases. A great deal of information is accordingly lost, making it difficult in some cases for the audience to follow the complex plot structure of classical dramas. The text also appears fragmentary, since a drama is, after all, a unified textual structure. In the case of contemporary plays, surtitlers treat the text more freely, condensing more by means of interventions in the sentence structure. The reason for this is probably the absence of so-called sacred texts on the reference level, and the fact that the plays themselves do not possess such great authority. Paradoxically, however, being presented in a distorted style leads to authors who are unknown abroad, e.g. in Germany and thus to an unintentional but obvious breach of loyalty<sup>23</sup> to the playwright on the part of the translator. The procedure should, in principle, be precisely the opposite.

The degree of abridgement of the source text that is needed to create the target text varies widely. The analysis of my corpus showed that this can range from a scarcely perceptible shortening to losses of nearly 50 %. For generalization purposes one would need to incorporate more plays as well as other language pairs.

One tendency, however, namely that classics are abridged more extensively than contemporary plays, has become obvious. In general it can be said that the degree of abridgement varies widely and depends on the amount of spoken text on the one hand, and on the tempo of speech in the spoken passages on the other. The degree of abridgement arises from the requirement of presenting two-line surtitles, which must remain visible for a certain period of time. Shortening the source text by one-half leads either to a great loss of information or to grave stylistic changes, and both options must be weighed against each other from the outset.

At this point, the central issue that emerged during the analysis becomes more than apparent; Surtitling can be an adequate method of interlingual transmission within the framework of TT. The only problem arises with surtitles as the exclusive method of translation. The initial goal is for translation to take place; the implicit skopos for the translation process is provided by the institution or person commissioning the surtitles, which however frequently contradicts the skopos that the translator chooses on the basis of aspects relevant to translation. Since the relationship is clearly hierarchical, however, and translation

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<sup>23</sup> I refer here to the definition of loyalty developed by Christiane Nord. (1989).

is often not accepted as the work of experts, the requirements of translation often give way to other concerns, which may prevent an adequate translation.

This shows us how important it is that translators need to be accepted in their role as experts. This means allowing them to undertake an analysis from the translatory viewpoint, and to embed surtitling in TT, implying that they may select the possible form of TT for an adequate translation after an analysis taking into account the perspectives of reception aesthetics, theater studies and translation studies. This today is still very rarely the case. The *Schaubühne* in Berlin, is an exception to this rule, however, in that it has accepted the experienced surtitler Uli Menke in his role as an expert, and now takes him along as an advisor on TT matters when guest performances are given abroad, regardless of the fact that he does not understand the language of the country. The model in Figure 2 is intended to illuminate the rare case in which the translator is deployed as an expert in TT:

This model, unlike the one presented in Fig. 2, represents not simply one translation method, but the entire process of TT. With this integrative model, there are no longer contradictory skopoi. Instead, through consultation, the translator and customer decide upon a common skopos, which in turn determines the choice of translation method. Here, too, the methods are largely translation hybrids, which are subject to the same difficulties as surtitling, and must overcome the same dichotomies. The acceptance of the translator as an expert, however, resolves the tension between conflicting skopoi.

This process is not specific to TT, but it solves some of the problems inherent in the complex process of TT. In principle, one can apply it to virtually any translation process.

## 5 Concluding Remarks and Outlook

In conclusion, one can say that surtitling can be a suitable form of transmission for foreign-language productions. One must be aware of certain factors, however, such as changes on the stylistic level, difficulties of reception, contradictory skopoi, the two-phase nature of the production process and working with a prototype, which in the concrete target situation is at the mercy of the performance situation, with all its potential surprises, i.e. the degree and strategies of abridgement, the presentation of the target text, the extent of interventions in the stage set, as well as financial and temporal aspects, and other factors.

All of these aspects must be weighed with respect to the assumed skopos, in order to apply the appropriate method of transmission for the individual production and thus to remain 'truthful' to the author, to oneself, to the commissioning body as well as to the audience.

No doubt there are plays for which surtitling is the appropriate method, since it has its strengths of course, which directors in particular greatly appreciate. It does not intervene too obtrusively in the events on stage, there is no interference from extraneous noise or additional actors, and it provides not the daringly abbreviated form of the printed synopsis, but rather a continuous translation. The danger, however, is that it lacks transparency in that the audience does not realize how strongly, and in what form, the text has been abridged.

It was not my intention to evaluate surtitles but to allow for a few doubts about whether, as many believe, surtitling in the theater is the best mode of transmission for all plays. I also understand my work as an argument in favor of considering translators as experts, for an adequate translation can only be provided when all other means available for a successful translation are considered: the cultural memory to fill in the blanks, the careful insertion of additional information in the translation process and the necessity of making full use of all means of artistic expression. Taken together, these prerequisites for an adequate translation underline the necessity of advisory function and of the transparency of the translation process and show that the ideal form of TT for a production is not any particular form, but rather the suitable one.

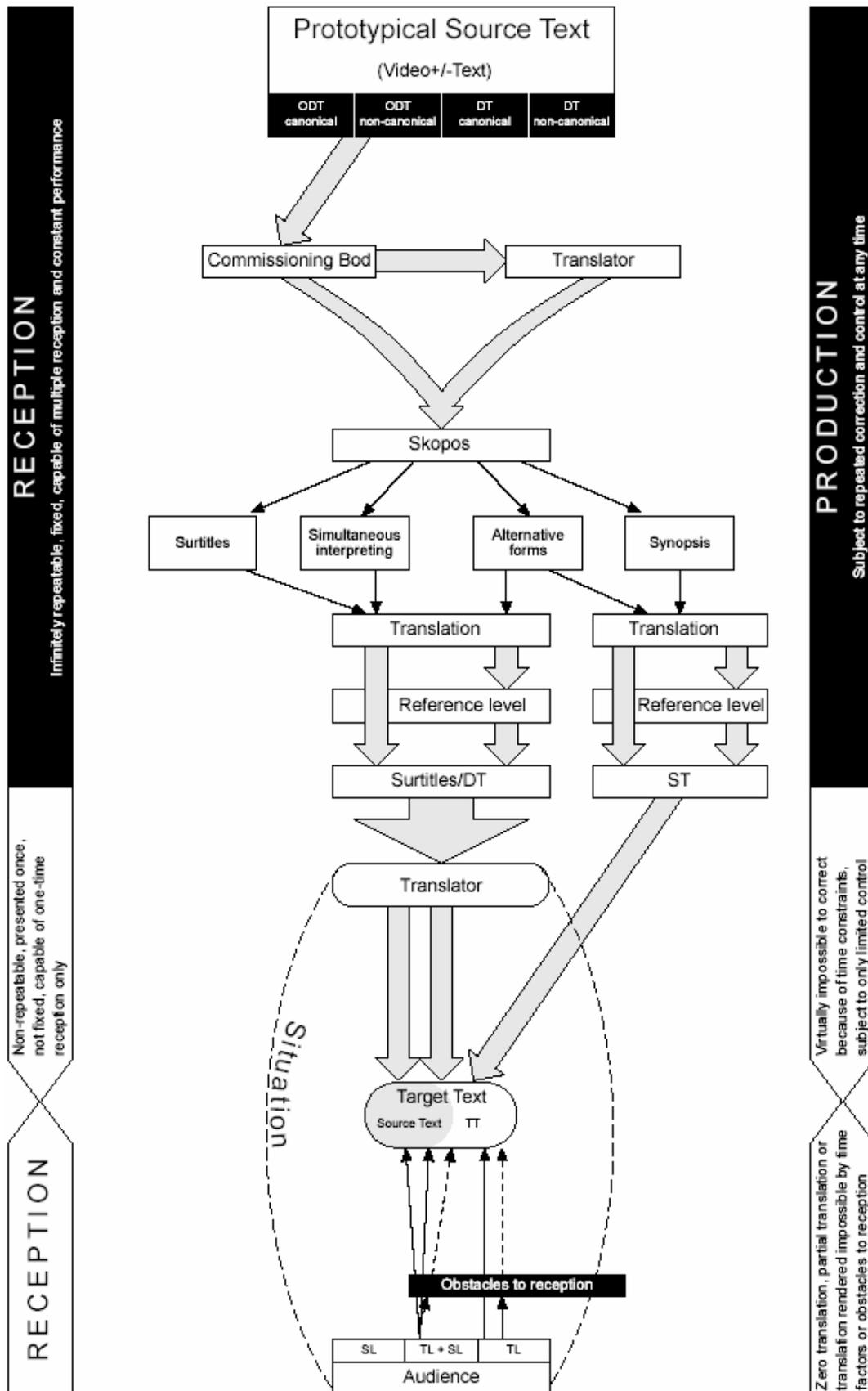


Fig. 3: TT Model with translation expert

The study has shown that far more research is needed in this area. It is a fascinating field of study, which not only touches on the problems of interpreting and translating, but even unites them in a process of producing translation hybrids, a very challenging enterprise indeed. One is often tempted to disengage certain areas of TT from translation studies. The present study has shown, however, that what we are dealing with is most definitely a translation process, which is currently taking place in the theaters of the world, and in the described manner. It is a purposeful process motivated by a dual skopos, which aims to produce the best possible translation. Literary and theater studies will address the aesthetic and artistic aspects of theatrical productions, but the aspect of translation is a matter for translation studies. If the theories of translation studies are too narrow for TT, that only means that they have not yet been conceived broadly enough for certain translation processes, and need to be expanded. A good deal of research remains to be done here, and I understand my work as an invitation to others to explore this interesting field of study.

The preoccupation with TT also shows that an integrative approach is essential for both translation and translation studies. On the one hand, we need to view the forms of TT as potential translation processes, since no adequate translation is conceivable otherwise. Likewise, we need to overcome the separation between translation and interpreting in our theoretical reflections, and also include the explicit as well as the implicit skopos. The co-existence of various skopoi is precisely the point of tension that can hinder translation, if we fail to accept it as the work of experts, and to take advantage of the professional competence of translators and the research that is under way on the operationalization of the translation scopos (cf. Sunwoo 2007).

In this sense TT is a prototypical example for the importance of the research field of multidimensional translation (cf. the other articles in this volume).

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## Multidimensional Translation: A Game Plan for Audiovisual Translation in the Age of GILT

### Contents

- 1 Context
- 2 What are video games and how are they globalized?
- 3 Video game localization models
- 4 Translation issues
- 5 Research issues
- 6 Conclusion and further work
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### Abstract

GILT practices which incorporate Globalization, Internationalization, Localization and Translation continue to develop in response to the market demand while theorization on this dynamic domain is still lagging behind in academia as the industry leads the way. GILT places language transfer in the wider context of globalization and also highlights the specific processes necessary to deal with electronic content such as computer software and web sites. This article attempts to shed light into video game localization as an example of emerging GILT practices. Games localisation highlights the multidimensionality of translation arising from the nature of this medium as a digital interactive entertainment, incorporating software features, gameplay and non-interactive film components all within one platform. Taking the case of PlayStation Final Fantasy games, this paper attempts to demonstrate a number of unique aspects of translating video games, which involve elements of audiovisual translation and software localization. The author suggests avenues for Audiovisual Translation research in this less known and yet fast growing area of language transfer.

### 1 Context

The 1990s saw the dramatic rise of the localization industry which had emerged during the 1980s, driven by the international market for personal computers where an increasing number of software programs were required to be localized into target market versions called locales. The main difference between localizing software and translating a piece of text was that the former involved the translated text strings being recompiled into the software environment. It called for combining language translation with software engineering, further entailing new procedures such as functional and linguistic testing of the localized product. This was beyond the normal call of a translator and as a result a new specialized sector emerged in close association with the computer industry. More recently, the new term GILT has been introduced, incorporating Globalization, Internationalization, Localization and Translation, reflecting the complexity involved in making a product or content global-ready. In GILT, the term internationalization refers to a specific pre-localization process which involves building technical allowance into the original product to minimize the subsequent need for re-design or

re-engineering. It also addresses the cultural implications of the original content such as the use of colors, images, icons, etc. In this way, GILT places language transfer in the wider picture of globalization and also highlights the specific processes needed to deal with electronic content.

GILT practices continue to evolve in response to market demands for the globalization of a variety of content. The localization paradigm is maturing on the basis of industry experience while theorization on this dynamic domain is still lagging in academia. The study of the localization paradigm provides an insight into new emerging dimensions and possibly points to a future translation phenomenon (O'Hagan 2004). It will also help prepare the translation sector to accommodate the new changes. To this end, this article attempts to explain and understand the localization paradigm with a particular focus on video game localization as an example of GILT practices. Multidimensionality of game localization is explored linking it to audiovisual translation and software localization. This article partly draws on earlier studies undertaken with one of the best selling Japanese game title Final Fantasy (Mangiron and O'Hagan 2005; O'Hagan and Mangiron 2004a; 2004b).

## 2 What are video games and how are they globalized?

Today video games have grown to be the “world’s largest cult phenomenon” (Grossman, 2004) and established themselves as part of the global pop culture. In terms of market scale, the worldwide turnover of the video game industry is comparable to that of the film box office (Grossman, *ibid*). According to 2005 statistics by the Entertainment Software Association (2005), the average age of the players is increasing, and is estimated at 30 in the US. Another characteristic is the dominance of Japan as the game producing as well as consuming country, which has an implication for localization and translation issues, involving Japanese language. Setting aside the moral questions often associated with video games (Poole 2000), this domain represents a significant industry sector in terms of a future source of work for translators as well as a wealth of research issues.

The history of video games goes back to the early 1960s when Higinbotham, an engineer at a US government nuclear research lab put together a rudimentary tennis game on an oscilloscope, followed by *Spacewar* invented by MIT students (Poole 2000:15-17). The late 1970s into the 1980s saw the commercial success of *Space Invaders*. Despite its history of developments over nearly half a century and the significance of the market as well as frequent media attention, the games domain is only recently being recognized as a serious target of study in academia (Newman 2004; Wolf and Perron 2003). This, in turn, is reflected in the unstable use of terminology within the domain. For example, even the use of the term “video games” (sometimes spelt as one word) itself is in dispute with some games researchers preferring the term “digital games” as in the case of Digital Games Research Association (DIGRA). In the localization sector the term “video games” seems to be in more common usage as in Chandler (2005). This article follows the convention in the localization sector and its definition by Frasca (2001:4) as: “any forms of computer-based entertainment software, either textual or image-based, using any electronic platform such as personal computers or consoles and involving one or multiple players in a physical or networked environment”. Central to this definition of a video game is that it is regarded as *software* which is produced for *entertainment* purposes. Another key terminology in this domain is “interactive publishing” which refers to publishing of interactive software, thus highlighting another prominent characteristic of games: *interactivity*.

Although it is beyond the scope of this paper to describe the entire domain of video games in detail, it is relevant to cover some basic building blocks of games which relate to localization. First of all, there are different genres of games which can be classified into

separate groups as: Action and Adventure; Driving and Racing; First Person Shooter (FPS); Platform and Puzzle; Role Playing Games (RPG); Strategy and Simulation, and Sports and Beat-'em-ups (Berens and Howard 2001:25-26). Regardless of genre, games consist of definite elements such as Graphics, Sound, Interface, Gameplay and Storyline (Howland 1998), all of which affect the localization process. Games also come in PC-based, console-based or handheld platforms as well as arcade versions. Different genres and platforms highlight different research issues and thus are significant in games research.

Looking at the video game from GILT perspectives, it can first be analyzed in terms of internationalization requirements. As touched on earlier, this process entails preparing the content to facilitate the subsequent localization and translation. Internationalization of a game involves making such elements as the code base, core feature set and User Interface (UI) generic enough to minimize re-engineering when the product is localized (Chandler 2005). For example, the game code should be able to support the required character sets while UI design needs to incorporate the target text string expansion. Also, the gameplay needs to be relevant to the target player in terms of features and culture-specific references. These dimensions are to some extent common with software localization. Additionally, game developers need to take into consideration censorship and age rating requirements in the internationalization process, which may differ from country to country. For example, Germany's ratings board USK (Unterhaltungssoftware Selbstkontrolle) is well known for its strict mandatory rules for gore/violence levels, use of profanity and symbols related to racial hatred. Any game to be exported to Germany should ideally be designed at the start with these requirements in mind.

The advancement of computer technology and increased production budgets have changed the landscape of video games today with the use of 3-D graphics, AI (artificial intelligence), high-fidelity audio etc, creating more compelling gameplay experience. This also meant that there are many more elements to be localized than earlier games, including various in-game assets such as text, audio, art (i.e. graphics with textual components) as well as cinematic assets commonly known as cut-scenes. In-game audio assets are dialogs between characters and environmental sounds which may or may not be subject to localization. The use of actual human voices for in-game dialogs is a relatively new technical dimension which became available only with sufficient hardware memory. Cut-scenes refer to mini-films inserted within a game typically in-between levels to move the plot along or at the end of the game as a reward. This constitutes the only non-interactive element within the game and its rationale is debated among some players as well as games researchers (Newman 2004). Nevertheless, it is a significant element from the localization point of view as it becomes subject to translation in the form of dubbing and subtitling. Furthermore, songs also constitute an important component subject to translation as discussed later. Game localization involves techniques similar to screen translation and yet the nature of the content is such that the norms of audiovisual translation do not always apply (Mangiron and O'Hagan 2005). Regardless of the type of game, a common principle behind gameplay is for the player to progress to a higher more difficult level according to the rules set by the game. However, the pleasure and appeal of gameplay is much more complex than simply climbing up the levels. This factor is as significant to game localization as the question of how to re-create the equivalent gameplay experience in a localized version is one of the critical issues constituting the ultimate goal of game localization.

### **3 Video game localization models**

Video game localization is comparable to software localization in a number of aspects, including the overall localization cycle. The details of the cycle may differ, depending on

whether or not the process is undertaken in-house by the publisher or developer of the game, or out-sourced to a localization vendor. It also depends on whether it is sim-shipped. Simultaneous shipment known as “sim-ship” entails producing localized versions at the same time as the original version and is a well-established practice in the software localization sector. For the games industry, this model is commonly used for game titles produced in Europe in English whereas Japanese game publishers/developers tend to use the model where the release of localized versions lags behind that of the original. The sim-ship model has a particular implication for the translator who must work with unstable source content which is still under development. Working in this mode often does not allow the translator to see the game in its complete form and contrasts with the non sim-ship model where the translator has a chance to familiarize himself/herself with the game via walkthroughs etc. Given the structure of games being multi-faceted with text strings arranged in a non-linear fashion, in the sim-ship model translation could easily go wrong if a clear context is not provided. And yet, the translator more often than not is expected to work without the context in which each text string is to be placed. This is likened to translating blindfolded and calls for a specific translator competence: familiarity with the game domain in general so as to fill in the gaps and also the ability to ask the right questions in search for context (Ballista private communication 2005).

A localization model which is unique to games, and, in particular, to certain Japanese game developers/publishers, is the so-called “International” or “Final Mix” which is released exclusively for the Japanese market. The term “international versions” commonly refers to localized versions, but in the above case, the term specifically means a hybrid version produced based on the North American version of the original Japanese. It sounds extremely convoluted, but this example serves to illustrate: (i) how the conventional relationship of translation to the source text (content) takes on a different meaning in a particular localization model; (ii) the role of “foreign text” to contribute to the “look and feel” of the localized product; and (iii) the flexibility of digital technology to change not only text but images in a new version (this last aspect is dealt with under the section “Translation Issues”). A case in point is the PlayStation2 game *Final Fantasy X-2 International and Last Mission* (referred to as *FFX-2 International* hereafter) published in 2004. In this version, all the spoken dialogs are in American English with Japanese subtitles<sup>1</sup> whereas the rest of the game such as UI elements and other in-game messages are in Japanese, in fact, making it difficult to play without the knowledge of Japanese. This International version also incorporated some major new gameplay features<sup>2</sup>. Although these new features provide added value for players, the main appeal of the International version lies in its foreign feel for the Japanese players who enjoy gameplay as part of global culture thanks to the use of English dialogs. However, the most important and curious point from translation perspectives is the fact that this hybrid version is created from a localized version by translating it back into the source language. It is apparent that the Japanese market supports<sup>3</sup> the production of such a version in which the Japanese players seem to enjoy the different feel of play. *FFX-2 International* also provides an interesting case study regarding types of changes made from the original version. In the International version, the Japanese subtitles for in-game dialogues are produced fresh to match the dubbed American version, instead of using the original Japanese script.

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<sup>1</sup> Subtitles are the cinema convention for foreign films in Japan and accordingly Japanese game players are used to reading subtitles.

<sup>2</sup> The North American version already contained a few improvements added to the original edition, which, in turn, are also passed on to the International version.

<sup>3</sup> For example, the *Final Fantasy X International* released in 2002 with no new added gameplay features still sold 260,000 units in Japan (<http://japmax.com/news6.htm>).

The two localization models highlight the characteristic of the localization paradigm which seeks the equivalent relationship with a comparable local product to retain its “look and feel” (Fry 2003). With the sim-ship model, the lack of context is often filled in by the translator’s domain knowledge on video games in general. As such it somewhat diffuses the power of the source text by replacing it with the translator’s gut feeling of what a game should look like. In this model the simultaneous availability of the localized versions side by side with the original could further give the illusion of a localized version being the original rather than its translation. But this is only when localization is carried out successfully. Unsuccessful localization may produce games that feel lackluster with players preferring to go to the original game despite the apparent difficulty in understanding the language (Chandler 2005). This in turn can be linked to the localizer’s lack of attention to the original gameplay experience.

The Japanese market specific International version demonstrates the importance of the “look and feel” of the game as part of a global product while keeping “localness” by creating a hybrid version. In this model the overall gameplay experience of the original seems not only to be retained but enhanced with the incorporation of the additional global touch. Although this model is not representative of game localization on the whole, it provides insight towards establishing a widely applicable game localization model.

While the general localization principle places an emphasis on the localized version blending in with locally produced equivalent products, game localization specifically seeks the game experience of the original version to be conveyed. How is this achieved? In order to further pursue this question, the next section homes in on the translation issues associated with the localization models.

## 4 Translation issues

This section discusses a number of translation issues that arise from particular localization models applied to the games domain. The first example is where the English version is used as a pivot for localizing Japanese games into European versions. Due to the cost implications, in-game dialogs in *Final Fantasy X (FFX)* and *Final Fantasy X-2 (FFX-2)* were only dubbed into English and this, in turn, served as the basis for subtitles into other European languages (Mangiron 2004). Using the dubbed version as the source text sometimes creates an issue due to the liberty already taken in dubbing as this could be mirrored uncritically into the subtitled versions. For example, in a scene in *FFX* the last words spoken by the main character Yuna to her lover Tidus was translated into English as “*I love you.*” in the North American version from the original Japanese phrase

“□□□□(arigato) [thank you]” (Mangiron *ibid*).

This decision in the American version subsequently caused a reaction among some fans who considered it out of character for Yuna who had been portrayed as rather reticent. However, the European translators had no option but to work from the American rendition since it is the American dubbed version which the players will hear in the European versions of the game (Mangiron *ibid*). While the problem of using a pivot language is not a new one with some Japanese RPG titles in particular part of their appeal lies in their perceived foreignness to the rest of the world. Games such as the FF series seem to have succeeded in keeping their delicate balance, being at once familiar and foreign to the target players. This suggests the need for translation strategies for Japanese games to take into consideration what to domesticate and what to foreignize and yet such attempts may be undermined by the use of the pivot language version from which translators have to work.

Other translation issues to highlight the unique dimensions of game localization can be drawn from *FFX-2 International*. Because the International version has dialogues in English based on the North American version, their Japanese subtitles were newly created to match the voice in English. The resultant Japanese subtitles reflected the freedom taken in the translation of the North American version. For example, in one scene of the American version of *FFX-2* the translator had invented the name “*Dullwings*” in a play on words for the name of the group called “*Gullwings*”. This addition in the translation was to further contextualize the adversarial relationship between two opposition groups and to add a touch of humor (Mangiron and O’Hagan 2005). Interestingly, this term “*Dullwings*” made its way into the Japanese subtitles for the International version, resulting in a similar play on words as in

□□□□(bakame-dan) [Dullwings] from □□□□ (kamome-dan) [Gullwings].

Other manipulations manifested in the International version concern nonverbal communication cues. One example relates to a gesture tied to a linguistic feature of the Japanese language. In one scene in *FFX-2 International* the image of one character’s nodding gesture in the original Japanese was replaced by that of a head shaking gesture to follow the English convention when giving the “no” answer to the negative question: “*Aren’t you gonna return it?*” (Square Enix 2004). In Japanese, answers to negative questions are given in the opposite way to that in English; if the answer affirms the question, the response is “yes” accompanied by a nodding gesture, as shown by the character’s gesture in the original *FFX-2*. The change made was an apparent attempt to match the English dialog. This example contrasts with the screen translation norm for cinema where text is always subordinate to image which is primarily regarded as set in stone.

The game domain has its unique features drawn from other genres such as *Anime* and *Manga*. Similar in particular to *Anime*, soundtracks constitute a very important element in a game as part of its “look and feel” and they are often dubbed or subtitled. The translation of lyrics sometimes involves considerable adaptation particularly when sung in a new language version. For example, for the North American version of *FF X-2* the theme song

“1000□□□(Sen no Kotoba)” [One Thousand Words]

underwent a transformation. One English version with the lyrics in a fairly close translation to the original was sung by Kumi Koda who had also sung the original Japanese soundtrack. However, this version did not make the final North American release and an entirely new version was used sung by the American singer Jade. The following extract shows parts of the lyrics to illustrate the differences between the two versions. The left-hand side shows the final release version by Jade, with the version sung by Koda, on the right:

<b>1000 Words Lyrics - Jade Version</b>	<b>1000 Words Lyrics - Koda Version</b>
‘Cause a thousand words Call out through the ages They’ll fly to you Even though we can’t see I know they are reaching you, suspended on silver wings Oh a thousand words One thousand embraces Will cradle you Making all of your weary days seem far away They’ll hold you forever	Those thousand words Have never been spoken So far away I’m sending them to you where ever you are Suspended on shiny wings Those thousand words Have never been spoken They cradle you Make you no longer dare seem so far away And hold you forever

Oh a thousand words (a thousand words) Have never been spoken (ohh yeah) They'll fly to you They'll carry you home, (carry you home) and into my arms Suspended on silver wings (on silver wings!) And a thousand words (ohh) Call out through the ages (call through the ages!) They'll cradle you (ohh yeah) Make all of the lonely years to lonely days (lonely days) They'll hold you forever.	Those thousand words Have never been spoken Lalalala I'm sending them to you where ever you are Suspended on shiny wings Those thousand words Have never been spoken Lalalala Making all of that years feel like lonely days Lalalalaaa
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source: <http://www.ffx2.com>

In this example, an extreme form of explicitation where the refrain "la la la..." from the original Japanese lyrics is replaced with new words is made among many changes. Nevertheless, the Japanese subtitles which appear with the above song are the original Japanese lyrics, not reflecting the freedom taken in the English translation. This example serves to demonstrate the flexible rules applied to games where, on the one hand, extensive adaptation takes place to make the text sound natural in the target language while at the same time the original version is used as subtitles, discounting the changes made in translation. The extent of the discussions which take place in various fan websites<sup>4</sup> on these different versions of songs indicates the significance of the songs in games and also the respect to the original versions.

By focusing on Japanese video games this section highlighted the multidimensional translation issues combining some new and some known norms which are faced by translators involved in game localization. Translation strategies for video games could be explained from the functionalist point of view with the game's goal of retaining the original gameplay experience in a new version. Nevertheless, the existence of different localization models further complicates the task of translation. To this end, more systematic and granular analysis of translation strategies is called for as a basis for a new framework which effectively incorporates all game-specific dimensions. The following section explores a number of potential research areas for translation studies scholars, which may lead to the development of a useful framework of analysis of this new domain.

## 5 Research issues

There is currently a clear paucity of games research from the translation studies perspective (O'Hagan forthcoming). The following list suggests possible areas of investigation based on prior studies in which I was involved (Mangiron and O'Hagan 2005; O'Hagan and Mangiron 2004a, 2004b). The list is not intended to be either comprehensive or systematic, but rather exploratory.

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<sup>4</sup> see [www.ffx2.com](http://www.ffx2.com); <http://www.squareinsider.com/forums/lofiversion/index.php/t5339.html>

## 5.1 Digital textology and ludology perspectives

Games text is non-linear and may appear in different parts of the game from different levels or as side games, such as mini-games which are a digression in relation to the main storyline. Translations are affected by such an uneven structure particularly when the translator is required to work without actually seeing the game. Nevertheless, this structure can be likened to a hypertext arrangement where text is elastic and can be seen as a feature of new digital text whose context is rather fluid compared with conventional text. Another aspect which can be studied in relation to games text is the question of image-text hierarchy in game localization. Unlike screen translation subtitle norms where text is always subordinate to image, game localization allows an image to be modified to match the text, as illustrated in one of the examples discussed above. Consideration of the optimum factors in determining changes between text and image could provide an interesting area of study. The study of digital text in the form of digital textology could lead to the systematic analysis of translation strategies for games in relation to the new dimensions of digital text.

Furthermore, as generally agreed among games researchers today, the analysis of games is considered incomplete if it is viewed only from a narrative perspective. This is resulting in a more holistic approach, involving both narratology and ludology dimensions (Newman 2004; Wolf and Perron 2003). The ludology perspectives will also be beneficial for the study of game localization in eliciting what constitutes “gameplay experience” which the translator strives to recreate in a localized version.

## 5.2 International game design

This subject relates to the internationalization process in GILT practice. While some technical aspects of the internationalization process are well explored and can be standardized to some extent, truly international design is currently out of reach (O'Sullivan et al 2004). In particular, some Japanese games pose an interesting dilemma between the call for domestication (e.g. adjustment of the source culture-specific nonverbal cue with the shaking head to match the “no” answer in the English convention) and at the same time the need to retain the original feel by deliberately foreignizing it (e.g. “thank you” as the lover's last word may be more in keeping with the Japanese character showing a particular cultural trait, thus becoming an attraction point for the international audience). Given the fact that the Japanese RPG genre has established itself internationally almost because of its Japanese appeal (Thomson 1999), it is a factor in localizing certain Japanese games. Similarly, as evident in the rationale behind the International version, the Japanese players in turn deliberately seek a global touch through playing a version which is partly in English. These considerations, plus country-specific age rating and censorship requirements make the international design of games a complex but worthwhile topic to pursue.

## 5.3 Fandom

The extent of the potential impact of fans is a prominent factor shared between video games and such genres as *Anime* and *Manga*. In the advent of the Internet, the feedback from fans on newly released games is almost immediately broadcast on a worldwide basis. This includes comments on the quality of translation and localization, and such feedback can sometimes have significant commercial influence. For example, Square Enix, the developer and the publisher of *Final Fantasy* games, decided to undertake localization in-house based on the negative feedback received from some fans on its first localized effort with *FFVII* which had been produced using the outsourcing model (Mangiron private communication 2004). The

extent of the intensity of fan activities is also reflected in the phenomenon known as fan-subbers where fans produce their own subtitles for *Anime* films for free distribution (Nornes 1999; O'Hagan 2003b). The trend of fan-based subtitles and translation have become well known lately also with the unprecedented publication success of the *Harry Potter* series of books where underground translations were made available by impatient fans who could hardly wait for the official translations (Schaffner 2004). The same applies to some game titles for which fans take on the task of creating their own translations. These areas of fan activities could make a significant impact on professional translation and yet they are little discussed in published academic papers, thus providing a worthy subject.

#### 5.4 Applicability of CAT tools

Computer-aided translation (CAT) tools such as Translation Memory (TM) are widespread in GILT practices, reflecting the nature of the content being in electronic form, subject to frequent changes (e.g. sim-ship) and subject to a certain amount of repetitiveness. Interestingly, however, such tools are not commonly used in game localization (O'Hagan and Mangiron 2004b). The absence seems to be based on the claim that the type of translation involved in games requires extensive adaptation and creativity, thus not rendering well into CAT applications (Darolle 2004). A similar argument appears to be applied to subtitles in screen translation. And yet, a large number of games are serialized with the persistent use of certain key terminology such as names of weapons, spells, abilities, items etc. with recurring pet phrases in some titles. Given the ever squeezed production schedule and the increasing amount of translation needed for DVD audiovisual materials, technology-based solutions to translation will merit exploration. Empirical studies to investigate if and to what extent CAT can be applied and in what manner will be beneficial. For example, an earlier study (O'Hagan 2003a) found a surprisingly positive result in applying Machine Translation to reduce translation errors in human translations in the case where subtitles need to be produced within an extremely short time-frame. Empirical work in applying some CAT tools to games text will provide useful data in determining the areas of shortcomings and advantages of the current tools as well as identifying the need for a game-specific CAT tool.

### 6 Conclusion and further work

This article has focused on video game localization as an example of emerging GILT practices in an effort to highlight the new translation dimensions which are evolving. Linkages were drawn to comparable areas of software localization and audiovisual translation. Implicit in this was an attempt to introduce the little explored area of video games research to translation studies. Games research as an independent discipline is starting to gather momentum, stressing the need for an interdisciplinary approach. Translation studies perspectives will not only contribute to shedding new light onto this complex and somewhat controversial domain, but can also be commercially significant, given the size of the games market and its projected future growth in the global market (Entertainment Software Association 2005).

Table 1 summarizes the localization domain discussed above and also indicates the area of further work with audiovisual translation for films on DVD.

Product	Mode of language transfer	Pre-process for translation	Translation constraints	Nature of medium and content
<b>Computer software</b>	localization (technical translation)	internationalization; localization kit (TM terminology)	limited string length; imposed terminology and translation from TM; unstable source with sim-ship	technology-driven; some interactivity; functionality as paramount
<b>Video games</b>	localization (elements of screen translation)	internationalization; localization kit (walkthroughs, style guide, terminology)	limited string length; flexible image-text hierarchy; limited-context with sim-ship	technology-driven; interactive; gameplay as paramount with functionality; spatial exploration; non-linear text structure
<b>Films and DVDs</b>	localization (screen translation)	genesis file (fixed time codes across languages)	limited number of words; subordination of text to image; fixed time code	semi-interactive and explorative with bonus materials; linear text structure for film content

Table 1: Emerging Links: Software Localization, Game Localization and DVD Localization

In this table, the language transfer mode involved in films on DVD is treated as a localization practice, focusing on the change in the nature of the audiovisual content once it is put on DVD. A recently introduced methodology for achieving DVD subtitling in multilingual versions is the use of a so-called “genesis file” which constitutes a template-based approach imposing a certain degree of standardization. This file contains the source language subtitles against which all other language versions of subtitles are to be added with one fixed set of time codes. While this approach is perceived as new to screen translators, a template-based approach like this is all too familiar to software localizers. Screen translators dispute the merit of this approach as they consider it as detrimental to the quality of subtitles. At the same time DVD publishers argue that there is no other viable way to produce multilingual subtitles within the limited time-frame and the budget<sup>5</sup>. The reason for the diminishing time-frame also relates to the need to counter DVD film piracy by way of rapid turn-around of DVD releases. In the time to come, the shrinking time lag between the cinema release and that of the DVD may lead to something similar to the sim-ship model where DVD and cinema releases of films coincide, synchronized in multiple languages. This, in turn, may lead to the use of CAT which is little implemented in the screen translation paradigm as

<sup>5</sup> In the international media translation conference *In So Many Words: Language Transfer on Screen* held at London University in February 2003, the conflicts were clearly expressed between the conventional approach with which the screen translators are familiar and the new way of subtitling mainly driven by the production and market requirements for DVDs.

mentioned earlier. While screen translation and localization had not been directly linked before, a close association is developing in the advent of DVD.

Also, the pursuit of interactivity for DVD content is bringing the nature of the materials on DVD closer to video games. The current generation of DVD audiovisual content has not yet maximized the technical capability afforded by this medium. However, interactivity is beginning to be incorporated via UI similar to software and video game menu systems and also by adding elements of “games” which are currently being introduced albeit in a crude manner (e.g. *Bridget Jones: the Edge of Reason*). The game concept of hidden surprises known as “Easter Eggs” is sometimes also being incorporated into DVD bonus materials which the viewer can discover by selecting an object in a scene. An element of spatial exploration as common in video games is being introduced as part of interactivity to some DVD film titles (Smith 2005).

Multidimensionality observed with the new and upcoming GILT practices of video games localization can further be linked to DVD localization where audiovisual translation and localization come together. In this way, audiovisual translation is ideally positioned to be extended to the next stage of practical and conceptual developments.

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## Strategies for Translating from Finnish into German and vice versa

### Contents

- 1 Introduction
- 2 Characteristic features of the Finnish language
- 3 The influence of these specific features of Finnish in translating
- 4 Differences in language conventions and culture
- 5 References

### Abstract

This article is a summary of some experiences from my daily work as a translator, whose job it is to translate mainly from Finnish, a non-Indo-European language, into German, an Indo-European language, and sometimes also vice versa. A translator working with this language pair is confronted with several structural and cultural problems which are discussed in the following article.

### 1 Introduction

Finnish is one of the very few languages in Europe which do not belong to the family of Indo-European languages. In its grammatical structures the Finnish language is quite different for instance from the Germanic languages. In Finnish, there is no grammatical gender and the third person singular pronoun *hän* corresponds to both *he* and *she*. Finnish is a synthetic and agglutinative language: it uses suffixes to express grammatical relations and also to derive new words. There are only few prepositions and there is no definite or indefinite article.

When translating from Finnish into German or English or vice versa one has to take these characteristic features into account. When subtitling movies or TV-series from English – these are not dubbed – sentences like “he loves her, but she doesn’t love him”, require the translator to choose different strategies from just using the simple personal pronouns, because this would be resulting in a meaningless sentence *Hän rakastaa häntä, mutta hän ei rakasta häntä*.

Of course there are means of disambiguation which can be used in such situations. When translating juridical texts from Finnish into an Indo-European language for instance you will be sometimes confronted with a special problem: the original text is referring to a person in a way that his or her sex cannot be inferred. However, the translator has to choose equivalents in the target language which are either masculine or feminine.

The use of nouns is only one example of a problem which occurs when translating from Finnish into an Indo-European language. Also choosing the appropriate article may cause problems.

Beside of such structural problems which are caused by the structure of the language there are culture-specific features which have to be taken into account. Finnish has a polite form of addressing people like the German pronoun “Sie”, but in today’s communication it has become rather obsolete. Hotel guests and bank customers are addressed by the personal

using the colloquial pronoun *sinä* (*du* in German). Technical instructions, advertisements as well as help texts and commands in computer software mainly use the second person singular pronoun.

On the other hand Finns consider it as correct to keep a distance to other people. In advertisements published by Finnish companies you will rarely find sentences like “we can offer you...” which are considered to be obtrusive. Finns prefer to read advertisements written by using the third person forms (“The company XY offers its customers...”) or similar constructions.

Finland is a member of the European Union since 1995 and the recent accession of Estonia and Hungary (both Estonian and Hungarian languages are also non-Indo-European languages and are related to Finnish) will result in a considerable demand for people who are aware of the structural and culture-specific problems which can arise in translating between these non-Indo-European and Indo-European languages.

## 2 Characteristic features of the Finnish language

Finnish belongs to the family of Finno-Ugric languages. In Europe members of this family are: Estonian, Hungarian, Sámi (the language of the Lapps). Like these related languages, Finnish is a synthetic language with an agglutinative morphology, in other words: instead of grammatical “help words” like prepositions, pronouns or articles, the Finnish language mainly uses suffixes, which are connected to the stem of the word. For instance: *talo* (stem) = ‘house’, *talossa* (-*ssa*-ending = inessive case) = ‘in the house’; *talossani* (stem + -*ssa* + -*ni* = possessive suffix) = ‘in my house’; *taloistani* (stem *talo* + *i* = plural morpheme + -*sta*-ending = elative case + -*si* = possessive suffix of the second-person singular) = ‘out of your houses’.

Finnish has an abundance of cases that tend to baffle foreigners. There are at least 15 cases and nearly each one of them has its own ending. On the other hand it must be admitted that within this group there are six local cases (like the ones mentioned above) to express mainly local relations, for which German or English or another Indo-European language would use prepositional constructions.

The amount of different endings or derivative suffixes which can be combined with nominal or verbal stems is huge, e.g.: *suuri* = ‘big’ > *suurehkoillakin* (‘also with quite big ones’) = *suure-* (stem) + *-hko* (‘quite’) + *-i* (plural morpheme) + *-lla* (adessive case = ‘with/at something’) + *-kin* = ‘also’. One more example with a verbal stem: *heittää* = ‘throw’ > *heitteltepä* (‘you did throw frequently!’) > *heitt-* (stem) + *-el* (kind of action: frequentative) + *-i* (past tense) + *-tte* (ending of the second-person plural) + *-pä* (modal particle for strengthening the statement). The order in which these different endings are connected to the stem, is by no means arbitrary, in other words: there is a strict hierarchy between these endings. The ending *-kin* (‘also’) for instance always stands at the very end of the word.

One of the most typical features of the Finnish language is the possibility to produce thousands of different forms from a given root word by adding suffixes to it. For instance, nouns can be linked with approximately 2,000 different forms. Verbs can be conjugated and modified in about 10,000 different ways if one takes nominal derivatives from verbs also into account. Because compound words may contain a lot of information, the Finnish language does not need strict syntactic rules for combining words to sentences. Consequently, the position of the different phrases in the sentence is relatively free – compared for instance with English.

One special feature of Finnish is the so-called consonant gradation, which means that many morphemes have two forms: a strong one and a weak one, depending for instance on the case. One example: *kyky* ‘ability’; *kykyä* = case partitive (*kyky-* = strong stem + partitive ending -*ä*); *kyvyllä* (*kyvy* = weak stem + adessive ending -*llä* = ‘with the ability’.)

One more interesting feature in Finnish is the vowel harmony. According to this phenomenon, for instance, the endings of the cases inessive or relative may be *-ssa* respectively *-sta* (if the stem contains vowels like *a, o, u*) or they may be *-ssä* respectively *-stä* (after vowels like *e, i, y, ä, ö*). By the same rule the ending of the case adessive has either take the form *-lla* (as in the example *suurehkoillakin*) or *-llä* (as in the word *kyvyllä*).

Consequently, there is not only a huge number of different morphemes in the Finnish language which can be combined to one word, but due to the consonant gradation and the vowel harmony many morphemes can appear in two different forms. I would have thought that this feature would make Finnish a very difficult language for machine translation, but a colleague told me the opposite was true:<sup>1</sup> the computer programs for machine translation are specially designed for the parsing of complex morpheme chains. Much more difficult for them are languages like English, where one word (for instance *can* or *like*) may be a noun, a verb, an adjective, etc. Finnish is easier than English, because it is more regular. The morphological complexity problem has been solved, and there are already excellent parsers available.

Instead of subordinate clauses Finnish often uses so-called clause equivalents: *Tiedän, että siellä keitetään viinaa* > *Tiedän siellä keittävän viinaa* = 'I know that the people there are distilling booze'. This Finnish sentence contains the morpheme combination *keite + ttä + vä + n* (the stem is from the verb *keittää* 'to cook, distil'), a clause equivalent which makes it possible to change a complex sentence consisting of a main clause and a subordinate clause into one main clause only. Clause equivalents are thus an important means, of making the sentence more economical and they can help to avoid long and complex sentences. On the other hand, they should be used moderately: normally not more than one clause equivalent per sentence.

One of the most astonishing features of the Finnish language – from the viewpoint of a foreigner – is the complete lack of grammatical gender. Finnish has only one pronoun *hän* for the third-person singular (for 'he' or 'she'), which can refer to both a male and a female person. Consequently the possessive pronoun is identical for both genders (*hänen* = 'his' or 'her') as are the different case forms of the pronoun (*hänet* = accusative case, *häntä* = partitive case; 'him' or 'her' etc.).

Finnish nomina agentis (agents) are constructed by using the derivative suffix *-ja/jä*. For instance: *opettaja* 'teacher' (the verbal stem is *opetta-* = 'teach') or *näyttelijä* 'actor/actress' (the verbal stem is *näyttele-* = 'to act'). These words are gender-neutral and can refer to both males and females. Thus the Finnish language doesn't face such problems as the German language, where it is widely seen as a requirement of "political correctness" to always use both female and male forms: *Studentinnen und Studenten* respectively *Student/-innen* or sometimes also by using a capital I, the so-called "Binnen-I", e.g. *StudentInnen*.

In former times efforts were made to introduce a derivative suffix (*-tar/tär*) into Finnish – probably under the influence of nearby Indo-European languages like Swedish or German – to construct female names of professions: *opettaja* > *opettajatar* 'teacher (fem.)', *näyttelijätär* 'actress'. But today these forms are considered old-fashioned or obsolete. The suffix *-tar/tär* is actually quite old; it appears in the *Kalevala*, the national epic of the Finns, in names for female spirits, for instance *Ilmatar*, an elementary spirit of the air (derived from the word *ilma* 'air' + *-tar*).

In some situations, Finnish also still needs to express gender. For instance at the end of every year Finns choose the sportsman and the sportswoman of the year. In this case Finnish may use compound words, in which the first component expresses the sex: *miesurheilija*

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<sup>1</sup> Andrew Chesterman, information given per e-mail on September 16<sup>th</sup> 2005. – Kimmo Koskenniemi from the Department of General Linguistics (University of Helsinki) developed in his PhD (see References) a two-level morphology parser that has now been used on many languages, not just Finnish.

‘sportsman’ (translated into German word-by-word: ‘Mannsportler’; *mies* = ‘man’) and *naisurheilija* ‘sportswoman’ (translated into German word-by-word: ‘Frausportler’; *nainen* [stem *naise-*] = ‘woman’). The very conservative wing of the Lutheran Church in Finland still refuses to accept women as priests, and this creates the need to make the distinction between a *pappi* ‘priest (normally a man)’ and a *naispappi*, ‘female priest’.

The normal word for ‘friend’ in Finnish is *ystävä* and it can refer to a girl or a boy, a woman or a man. But if you ask an eighteen-year-old whether he has a girlfriend or not, one should use the compound *tyttöystävä* (made up from the components *tyttö* ‘girl’ and *ystävä* ‘friend’ just like the English *girlfriend*). Or the other way around (if you are going to ask a girl) the crucial word would be *poikaystävä* (*poika* = ‘boy’) like the English *boyfriend*.

Let me mention one more specific feature of the Finnish language: Finnish normally has no articles. The category of definiteness and indefiniteness may be expressed by using the cases nominative or partitive (with the subject) respectively accusative or partitive (with the object). During the past decades, colloquial Finnish has developed different ways of using some words like articles. For instance the numeral *yksi* ‘one’ > *yks mies* = ‘a man (informal style)’ or the pronoun *se* (which in noncolloquial speech refers only to animals and objects, but not to persons) > *se mies* = ‘that man (informal style)’.

### 3 The influence of these specific features of Finnish in translating

Which implications do the above-mentioned specific features have on the translation process? Let me first say something about translations of literature from German into Finnish. The German history of literature knows many authors who love to construct very long and complex sentences. One example is Thomas Mann. The average number of words per sentence in his huge novel *Doctor Faustus* (in the original version) is 31! Other examples are Hermann Broch and Robert Musil or, from the more contemporary literature, W. G. Sebald. In Finnish literature, long and complicated sentences are not very typical. I can recall only one Finnish author, who had an inclination to construct very long sentences: Volter Kilpi and his opus magnum *Alastalon salissa*, which is generally regarded as untranslatable. (However, Thomas Warburton successfully translated *Alastalon salissa* into Swedish.)

When translating a German novel containing many complex sentences into Finnish, one may use clause equivalents to reduce the number of subordinate clauses. Many Finnish translators actually use this strategy. Some time ago Tero Vilkesalo, a student of mine, examined the Finnish translation of the biography *Mozart*, which was written by the German author Wolfgang Hildesheimer. This book was translated into Finnish by Seppo Heikinheimo and his wife Päivi (Seppo Heikinheimo was a quite famous music critic). When comparing the original (the source text ST) with the translation (the target text TT) my student discovered that the original syntactical structures had nearly always been transformed into very similar Finnish structures. One short example:

ST: Den größten Wert legte er auf das Lob jener, die er selbst hochschätzte, aber das waren wahrhaftig nicht viele, genau genommen war es nur Haydn, der einzige Zeitgenosse, den Mozart bewunderte. (19)

TT: Suurimmassa arvossa hän piti niiden ylistystä, joita hän itse arvosti, mutta tällaisia henkilöitä oli todella vähän, tarkkaan ottaen vain Haydn, ainoa aikalainen, jota hän ihaili. (22–23)

The Finnish sentence is patterned exactly like the German one. Both sentences contain five commas within quite a short sequence. It would have been easily possible to replace at least one subordinate clause by a clause equivalent, for instance, at the very end of the sentence: “...*Haydn, ainoa Mozartin ihaillema aikalainen*” (‘Haydn, the only contemporary Mozart admired’).

Vilkesalo had examined the Finnish translation under the aspect of foreignizing – of allowing the features of the source language to influence the language of the target text – in the sense of how it was described by the German Romantic philosopher and translator Friedrich Schleiermacher i.e. : to “bend” the language of the translation as far possible towards that of the original. In other words, my student was of the opinion that the translators aimed at preserving the syntactic structures of the source text in loyalty to the author – but at the cost of Finnish sentences becoming relatively long and not very reader-friendly.

I could imagine another explanation. Seppo Heikinheimo and his wife may be called semi-professional translators. The fact that clause equivalents do not really occur in their translation could also be due to interference. It may be possible, that they translated the German sentences quite mechanically and thus transferred the German constructions straight into the Finnish translation.

The fact that there are virtually no articles in Finnish normally does not cause unnecessary problems for the translator. As a native speaker of German, I have no problems in translating Finnish sentences into German and using the appropriate articles in the right places. But for my Finnish students, the use of the right article (definite/indefinite or the so-called null-article) in German sentences is quite a difficult matter, because their mother tongue does not provide them with a profound understanding of an article system. But this fact is, of course, more a problem of language didactics rather than of translation (science).

On the other hand, the complete lack of a gender system in Finnish causes quite a lot of problems in translating. The translators of German or English novels must pay special attention to passages in the book, where personal pronouns like the German *er* ‘he’ and *sie* ‘she’ occur quite often. To give a very simple example: A sentence like “He loves her, but she doesn’t love him” cannot be translated into Finnish just by using the corresponding pronouns, since Finnish has got only one word for *he* and *she* (*hän*) and the result of a word-by-word-translation would be meaningless: “*Hän rakastaa häntä, mutta hän ei rakasta häntä*”.

In cases like this the translators could use different means of disambiguation. For instance they may use the proper names of the persons in the novel (*Mister Marcy* or *Miss Marble*) or proforms like *mies* (‘the man’) and *nainen* (‘the woman’) or similar words which fit into the context. (In her presentation at the MuTra 2005 conference in Saarbrücken, Professor Kinga Klaudy from Budapest mentioned some examples from translations into Hungarian, which also has only one pronoun for the third-person singular). Sometimes the translator may use also demonstrative pronouns to clarify the reference.

One could believe that professional translators who are trained to translate literature from German or English are quite familiar with these strategies. But from time to time critical reviews of translated literature in Finland point out that the excessive use of the pronoun *hän* may confuse the reader: “Which person is the narrator talking about right now?” The translator has fallen into the “trap of the third-person singular pronoun”.

I would tend to explain such false steps by a fact which is mentioned by Hans G. Höning (1997: 55): A text which is taken out of the realms of real communication and is projected into the reality of the translator, is amplified under the subjective eyes of the latter when scrutinized closely. Naturally the translator gets an overall view of the relationships between the characters in the novel, but it may be difficult for him/her to take the position of the reader, who looks at the text for the first time and normally catches only a short glimpse by glancing over the lines. If the sentences contain too many of these uniform *hän* pronouns, the reader will easily be disoriented.

The above-mentioned strategy I would like to call depronominization similar to the term “dépronominalisation” introduced by Michel Ballard (2004: 38). This depronominization can be regarded as a type of explicitation of the referent – or as a change

of explicitness; see for instance Andrew Chesterman (1997: 108-109).<sup>2</sup> This strategy could also be applied – *mutatis mutandis* – when translating from one Indo-European language into another, for instance when translating from English (a language with a vestigial natural gender system) into French or German, which have a fully developed system of grammatical gender. Here an example from a novel of Thomas Hardy quoted by Ballard (2004: 38)

ST: Between eleven and twelve the garden gate clicked, and she lifted her eyes to the window. //  
TT: Entre onze heures midi, la barrière du jardin cliqueta et Rhonda leva les yeux vers la fenêtre.

The French translator decided to replace the pronoun *she* by the Christian name of the person in question, because in the French sentence the close-by feminine word *la barrière* would otherwise disturb the reader. (In Finnish this situation would be different, because the pronoun *hän*, which would be the normal equivalent for the *she* in the sentence above, refers to persons only.)

I would like to quote the beginning of the short story *Der Andere* by Bernhard Schlink (from the book *Liebesfluchten*) in the German original (a), in the Finnish translation by Oili Suominen (b), and in a literal translation of the Finnish text into English (c) by myself. I have emphasized the words with depronominization in bold face type:

- a) Wenige Monate nach seiner Pensionierung starb seine Frau. Sie hatte Krebs, nicht mehr zu operieren oder sonst zu behandeln, und er hatte sie zu Hause gepflegt. Als sie tot war und er sich nicht mehr um ihr Essen, ihre Notdurft und ihren wundgelegenen Körper kümmern musste, musste er sich um das Begräbnis kümmern, um Rechnungen und Versicherungen und darum, dass die Kinder bekamen, was sie ihnen zgedacht hatte. Er musste ihre Kleider reinigen lassen und ihre Wäsche waschen, ihre Schuhe putzen und alles in Kartons packen. Ihre beste Freundin, Inhaberin eines Secondhandladens, holte die Kartons ab; sie hatte seiner Frau versprochen, dass die edle Garderobe von schönen Frauen getragen würde.
- b) Pari kuukautta sen jälkeen kun hän oli jäänyt eläkkeelle hänen vaimonsa kuoli. Vaimolla oli syöpä, jota ei enää voinut leikata eikä lääkittää, ja hän oli hoitanut potilasta kotona. Kun vaimo oli kuollut eikä hänen enää tarvinnut huolehtia tämän syömisestä, muista tarpeista eikä laihuneen ruumiin makuuhaavoista, oli huolehdittava hautajaisista, laskuista ja vakuutuksista ja katsottava että lapset saivat sen mitä vaimo oli halunnut heille jättää. Hänen oli viettävä vaimon vaatteet pesulaan ja pestävä alusvaatteet, hoidettava kengät ja pakattava kaikki laatikkoihin. Vaimon paras ystävätär, jolla oli käytettyjen vaatteiden kauppa, kävi hakemassa laatikot; ystävätär oli luvannut hänen vaimolleen, että tämän tyylikkääät vaatteet päätyisivät kauniiden naisten ylle.
- c) Some months after he had retired his wife died. His wife [literally: the wife] had cancer which could not be operated or treated, and he had nursed the patient at home. When his wife [literally: the wife] was dead and he didn't have care for her [literally: demonstrative pronoun] meals any longer, for the other needs and for the bedsores on the thin body, he had to take care of the funeral, the bills and the insurances, and he had to make sure that the children got the part his wife [literally: the wife] had wanted to leave for them. He had to bring his wife's [literally: the wife's] clothes to the laundry and wash the underwear, clean the shoes and pack them into boxes. His wife's [literally: the wife's] best friend [female form], who owned a second-hand shop, came to pick up the boxes; the friend [female form] had made a promise to his wife that the elegant clothes that she had owned would be worn by beautiful women.

It can be seen that depronominization of the German pronoun *sie* occurs in the translation several times. Mainly the pronoun was replaced by the noun *vaimo* ('wife') and once by the noun *potilas* ('patient'), and in one sentence the possessive pronoun *ihr* (respectively *ihre*, *ihren*) was replaced by the demonstrative pronoun *tämän*. The last

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<sup>2</sup> Chesterman makes a distinction between syntactic, semantic, and pragmatic strategies. The strategy of explicitation belongs to the latter ones.

pronoun *sie* in the quotation above (source text a) doesn't refer to the dead wife, but to a (female) friend of hers, and the Finnish text uses the explicitation *ystävätär* ('friend, female').

(This example with the word *ystävätär* shows that in this case the translator was forced to use the old-fashioned suffix *-tar/tär* for female persons – which was necessary, because the widower soon finds out that his wife actually also had a male friend (Finnish *ystävä*), a secret lover.)

Oili Suominen is a very experienced translator of German novels and her decisions have to be accepted, because if a short text passage contains a lot of pronouns like *er* and *sie*, at least some of them have to be replaced by other words. But let us read a little bit more from Schlink's short story, again the source text under (A), the Finnish translation under (B) and the literal translation of the Finnish text into English under (C):

- A) Auch wenn es sich bei alledem um Verrichtungen handelte, die ihm ungewohnt waren, war ihm doch so vertraut, im Haus geschäftig zu sein, während aus ihrem Krankenzimmer kein Laut drang, dass er immer wieder das Gefühl hatte, er müsse nur die Treppe hinaufsteigen, die Tür öffnen und könne sich auf ein Wort, einen kurzen Bericht, eine Frage zu ihr ans Bett setzen. Dann traf ihn das Bewusstsein, dass sie tot war, wie ein Schlag. Oft ging es ihm auch so, wenn er telefonierte. Er lehnte neben dem Telefon an der Wand zwischen Küche und Wohnzimmer, ganz normal, sprach über Normales, fühlte sich normal, und dann fiel ihm ein, dass sie tot war, und er konnte nicht weiterreden und musste auflegen.
- B) Vaikka kaikki nuo työt olivat hänelle outoja, hän oli vaimon sairastaessa kumminkin tottunut puuhailemaan hiljaisessa talossa, ja nytkin hänestä aina välillä tuntui, että kunhan hän vain kapuaisi portaat yläkertaan ja avaisi oven, hän voisi istahtaa vaimonsa sängylle vaihtaakseen muutaman sanan, kertoakseen tai kysäistäkseen jotakin. Mutta samassa hän kuin iskuna vasten kasvoja tajusikin että vaimo oli kuollut. Samoin kävi joskus kun hän puhui puhelimesta. Hän nojasi tapansa mukaan seinään keittiön ja olohuoneen välissä, puhui aivan tavallisista asioista, hänelle oli aivan tavanomainen olo, ja sitten hän tajusi että vaimo oli kuollut eikä hän enää pystynyt jatkamaan vaan oli pakko lopettaa puhelu.
- C) Although all this work was strange to him, he got used to be busy in the quiet house, and even now he still felt that if he just would rise up the steps and open the door he could sit down on the bed of his wife, change some words with her, tell her or ask her something. But in the same moment he realized like a blow into his face that his wife [literally: the wife] was dead. The same happened sometimes when he was speaking on the phone. He leaned against the wall between the kitchen and the living room as he used to do, spoke about quite normal things, had a quite normal feeling, and then he realized that his wife [literally: the wife] was dead and he was not able to continue and he had to hang up.

When recognizing the fact, that several *sie* pronouns were replaced by *vaimo* ('wife') in this second passage the bilingual reader starts to feel a little bit uncomfortable. The passage above is not a standard third-person narration but rather a piece of writing where, despite the intriguing use of the third-person reference, the narrative point of view is that of the male protagonist *er* ('he'). In other words: the narrator is able to look inside the mind of his protagonist. The German original conveys the impression that we are hearing the inner voice of the character reflecting on his thoughts and feelings after the death of his wife. The narrator uses a narrative technique called free indirect discourse (FID) which conveys a character's thoughts as they are thought by the character himself but which, nevertheless, maintains the third-person reference and also the past tense of narration.

This narrative technique is signalled by using expressions of inner movement (like "*traf ihn das Bewusstsein ... wie ein Schlag*" and "*fiel ihm ein, dass...*" / "*he realized...*" or "*it came into his mind...*"). Together with the so-called inner monologue the free indirect discourse is

an important means in modern literature which has the tendency to psychologize and to reflect the mental discourse of the characters.<sup>3</sup>

Due to the replacement of the pronouns in the Finnish translation the point of view, the sight into the mind of the protagonist, is modified to some degree; it is not so close any more, and the text has moved towards standard narration. The sudden realization “*sie ist tot*” (‘she is dead’) seems to be closer to the real “thought act” of the character than the statement “his wife was dead”.

In Finnish translations the compulsory replacement of the pronouns leads inevitably to difficulties in transferring the narratological structure, in this case the free indirect discourse.<sup>4</sup> In this respect we are dealing with an objective translation problem according to the definition by Christiane Nord (1991: 151). Anyone translating fictional texts into Finnish – texts with free indirect discourse combined with several different pronouns – will face this problem, despite the translator’s competence and in spite of the technical conditions of work.

The lack of a gender system in Finnish is not only a source of problems for the translators of literature. It may also cause difficulties for translators of many other types of texts, namely when translating from Finnish into another language. Quite often Finnish source texts tell the reader something to about someone without giving any information on whether this person is male or female. Last spring I had to translate the headline *Kimi on saanut uuden tiedottajan* (‘Kimi has got a new PR manager’) into German. (‘Kimi’ referred to Kimi Räikkönen, the Finnish Formula One driver.) My “raw version” of this sentence was “Kimi hat einen neuen PR-Manager”. (The noun *tiedottaja* is a derivation from the verb *tiedottaa* ‘to inform’). After a search on the Internet I found out that the manager’s name was Anna Sorainen. Thus the more equivalent German translation was “Kimi hat eine neue PR-Managerin”.

But not everyone is to be found on the Internet. The situation gets more complicated, if the Christian name of the person is not mentioned in the text or if it is abbreviated or not transparent in terms of biological sex. This may be the case with exotic names. An image search in Google may be helpful. Sometimes I ask my Finnish wife for help (“Can you please tell me, whether this person mentioned here is male or female?”) but in most cases I already know the answer (“Just on the basis of the text you cannot tell.”). Then I normally feel angry about the “strange Finnish language”, which allows speaking about someone without giving a clue to the reader whether it is a man or a woman. My wife’s standard answer in this situation is: “For us Finns this is not important! In Finland we are emancipated.”

Some time ago I had to translate documents for a trial in a Finnish court. The papers stated *Todistaja vahvisti lausunnossaan, että...* and so on. My German version was “Der Zeuge hat in seiner Aussage bestätigt, dass...” (“The witness has confirmed in his statement that...” – The name of the witness was not mentioned). A few weeks later I had to translate more documents about the same court proceedings, and there it became obvious that the witness was a woman. The more adequate translation would have been “Die Zeugin hat in ihrer Aussage bestätigt, dass...”

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<sup>3</sup> Grammatically speaking the inner monologue corresponds to the direct discourse (example: He felt: “I have got it!”) while in the free indirect discourse the third-person form and the tense are preserved (“He felt that he had got it.”).

<sup>4</sup> Tarja Rouhiainen from the University of Turku has dealt with this problem, as well as Ellen Valle (see References). I am grateful to my colleague Kristiina Taivalkoski-Shilov for directing my attention to this problem (as well as for the hint concerning Ballard). She has studied this phenomenon in translations from English into French, and her article “FID and Translational Progress: Comparing 18th-century and Recent Versions of Henry Fielding’s Novels in French” will soon be published in a publication series of the University of Tampere. – On a wider scale the problem of maintaining the narratological structure in translations, for instance the system of personal deixis, was examined by Levenston and Sonnenschein (1886).

Sometimes the translator really must make a phone call to the institution or organization in question and ask whether the person mentioned in the text is a man or a woman. But when working as a freelancer for a translation agency, the staff there does not like their freelancers to contact their clients directly. So instead of one phone call, it may be necessary to make several calls.

## 4 Differences in language conventions and culture

After 25 years of translating, I dare say that Finnish advertisement texts prefer to use more “impersonal” forms of address than for instance German.<sup>5</sup> This observation corresponds with the general inclination of the Finns to keep some distance in their contacts with unknown people.

Thus Finnish companies do not use in their advertisements statements like “We offer you...” They prefer to say it in a more reserved way: “The company ABC Inc. offers its customers...”, as if a third party, for instance a journalist, would write an economic article about the company. The use of “personal” expressions like “we offer you” is easily considered to be obtrusive.

One strategy I use when translating Finnish advertisements into German is to add a little bit of “personal” touch to the text, because the Finnish source text would sound quite reserved and “dry” in the ears of their potential German customers.

If on the other hand the customer is addressed directly in Finnish advertisements, the informal form *sinä* (‘du’ in German) would be used. As in German and in many other Indo-European languages (except English), Finnish also has both a formal “you” (‘Sie’ in German) and a familiar “you” (‘du’ in German). But in Finland the formal address (*te*) is nowadays restricted to quite formal situations, for instance when addressing the president of the state or very old persons.

Thus customers of banks and hotels in Finland, as well as potential car buyers and politicians taking part in talk shows on TV, are nowadays nearly always addressed with the informal *sinä* (‘du’ in German). This development may be a cultural influence from Sweden, and in some way it would appear to be a paradox when considering the usual habit of the Finns to keep a certain social distance to other people.

In a brochure of the hotel chain Sokos Hotels one can read for instance: *Tutustu hotellin tiloihin ja palveluihin osoitteessa www.sokoshotels.fi!* In a word-by-word-translation into German this would be: “Schau dir die Zimmer und Leistungen des Hotels unter der Adresse *www.sokoshotels.fi* an!” But in the translation rendered for my customers, I automatically replace the Finnish informal “*sinä*” forms by the German formal “*Sie*” forms, as “*Sie*” is still “good style” in formal, noncolloquial German communication. Using “*du*” when “*Sie*” is appropriate would sound condescending or even insulting.

Moreover, Finnish directions for use consist of a type of text in which the informal address is nearly the one and only possible form. In German directions for use, assembly instructions and similar texts normally use the infinitives of the verbs: “Vor dem Öffnen des Geräts das Netzkabel ziehen. Die Schrauben lockern und den Deckel abnehmen...” In contexts like this, the Finnish language uses mainly the imperative of the second-person singular.

This is also the fact in modern computer technology and can be seen at a glance in Finnish computer journals and manuals. Most of the options and commands which occur on

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<sup>5</sup> I myself have not collected any statistical data about this, but my observation is confirmed by the results of the licentiate thesis of Erja Tenhonen-Lightfoot (1992), in which she has compared Finnish and German advertising materials of banks and telecommunication companies.

the screen of computers are imperative forms of the second-person singular – as they are in English. While German uses infinitives, the corresponding forms in Finnish and in English are imperatives in the second-person singular: *Speichern / Save / Tallenna* or *Öffnen / Open / Avaa* or *Fenster schließen / Close window / Sulje ikkuna* etc. The corresponding formal forms of address (actually imperative forms of the second person plural in Finnish) – *Tallentakaa / Avaakaa / Sulkekaa* – are not used in contexts like this.

When translating computer texts from German into Finnish or vice versa one must take this into account. Some years ago my wife and I translated computer texts from German into Finnish for a medium-sized manufacturer of hardware and software whose European headquarters was situated in southern Germany. When we received the proofs we noticed that our translation was only a part of the whole job; many texts were translated into Finnish by other translators (obviously they had been living in Germany for quite a while), and they had used all these odd-sounding formal forms like *Tallentakaa* etc. We tried to explain to the customer that these forms must be changed, but the outcome of our intervention was that two German managers of the company – without any knowledge of the Finnish language and its conventions – wanted *us* to change our informal forms in accordance with the rest of the text! We refused to do this and lost a customer, but for me it felt even worse to realize that the overall image of the translator as a competent interlingual and intercultural mediator still needs to be improved.

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## Visualized. Information in Multilingual Translations

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### Abstract

This paper deals with multifaceted dimensions of the translation process. The two major issues addressed. are: (a) the semiotic interrelationship of verbal and nonverbal text parts, and (b) parallel translations for different target cultures. In principle, both verbal and visual information is localized in accordance with translation theory. By comparing source texts with their translations in various languages, we can establish what is standard practice in the translation industry. To this end, analysis was carried. out on several aspects of figures (segmentation, caption, type of figure, linkage to verbal text).in texts written for specialist and non-specialist audiences. Findings are presented. in a series of charts.

The answer to the question as to whether or not figure features are adapted. to the target culture's conventions depends on where the texts have been translated.. When figures are translated. in the target culture, there is evidence that measures for adapting them to text type conventions are sometimes taken. However, if the texts are translated. where they have been written, i.e. in the source culture, when it comes to adapting figures to the target culture, we find that only inscriptions in figures are sometimes translated.. Regardless of the manufacturers' nationality or field of business and of whether the texts are addressed. to specialist or non-specialist audiences, current practice in user brochures of German and Japanese provenance can be characterized. as the mere reproduction of figures in all target texts.

### 1 General

This paper deals with multifaceted dimensions of the translation process. The two major issues addressed. are: (a) the semiotic association of verbal and nonverbal parts of texts, and (b) parallel translations for different target cultures.

Translation theorists have long been calling for target culture text type conventions to be considered. in the translation of source texts (ST) (e.g. Vermeer 1986:43; Koller 1992:247 f.; Kupsch-Losereit 1998:168). My research endeavours in this field are a response to this call. This is indeed. a critical requirement since it has been set out in DIN 2345 – a standard for translation contracts (1998:12). Sorvali (1996:113) is obviously assuming compliance with text type conventions when she claims that “a translation is not a second-hand text but an independent one which has the same properties as any other text written directly in the target language”.

House (1997:79) speaks of the “application of a cultural filter” with respect to phrasing the target text (TT). However, the theoretical requirement is not meant to be restricted. to the verbal part of the text. In principle, both verbal and visual information (appearing as figures) is to be localized. to suit target culture conventions. Göpferich (1998:332) supports the request for localizing figures from the point of view of intercultural technical writing. Schmitt (1999:196), however, points out that localization of ST figures is more or less impossible in practice for economic reasons.

To date, no proposals have been made as to how visualization practice would have to change were figures to be localized.. This is primarily due to the lack of knowled.ge of, and experience with, text type conventions. From his perspective as a translation teacher, Kussmaul (1995:83) stresses the need. for research in this field:

We have seen that for the proper functioning of a translation, text type conventions must be taken into account. It would be very helpful if these conventions and the differences between conventions in the source and target language were known. For this reason we should encourage corpus-based. contrastive studies.

Furthermore, elaboration of criteria for comprehensive analysis of figures’ functions and quality in relation to the verbal text has only just begun (Kalverkämper 1993; Horn-Helf 2004). “Corpus-based. contrastive studies”, as mentioned. by Kussmaul, are carried. out to reveal text type conventions in at least a bicultural contrast. In as far as data is given for original texts, some information of this kind can also be inferred. from the charts in the following sections.

The main intention of this paper, however, is to explore standard practice in the translation industry and to establish whether or not, and to what extent, the challenges of dealing with multiple linguacultures are accounted for. This can only be done by comparing STs with TTs in various languages. To this end, I have analyzed. several aspects of figures in texts written for expert and non-expert addressees. The results of my investigations are presented. in a series of charts which are based. on the following text corpora.

## 1.1 Text corpora

[A] Chapter of a German book manuscript on Direct Red.uction<sup>1</sup> (includes 29 figures) with English and Russian translations (Werner n.d.; Tulin et al. 1987).

[B] Two corpora of German manuals for industrial machinery and measuring instruments, respectively (include 105 figures) with two or more translations, including English language versions.

For comparison purposes:

- analysis data from two corpora of manuals originating in the US and UK (including 223 figures – Horn-Helf 2004).

[C] Two corpora of English manuals from Japanese manufacturers of office equipment and consumer electronics, respectively (including 318 figures) contained. in multilingual brochures in up to 8 languages, including German language versions.

For comparison purposes: analysis data from

- two corpora of German manuals for household appliances and consumer electronics, respectively (including 200 figures) contained. in multilingual brochures in up to 15 languages (Horn-Helf 2004).
- two corpora of manuals originating in the US or UK (including 310 figures – Horn-Helf 2004).

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<sup>1</sup> A special type of steelmaking process, bypassing the blast furnace.

## 1.2 Analysis

- Segmentation of figures (item marking/keys and legend vs. figure inscriptions)
- Captions (captioned. vs. uncaptioned.)
- Types of figures (photograph, engineering drawing, schematic diagram, etc.)
- Linkage of figures to verbal text (textual by references vs. topical by shared. topic).

## 1.3 Text presentation and integration of figures

Two forms of text presentation can be distinguished. in manual brochures for expert addressees: the first may be called. a **full version** and the second is columns. Full versions are fully illustrated. texts in page format, i.e. each TT contains the complete set of figures. In the case of columns, ST and TT are arranged. in parallel, with common figures extending across the columns.

Apart from full versions and columns, brochures for non-expert addressees may contain **partial versions**. These are partly illustrated. texts in page format, with some figures in each version, and with common figures placed. at the beginning or end of the brochure. In German brochures a folding sheet (“Ausklappseite” according to DIN EN 62079 2001:29) is frequently inserted. for this purpose. If ST and TT are arranged. in parallel columns, a separate column is provided. at the margin for common illustrations.

## 1.4 Handling figures when translating technical texts

In the 1970s and 1980s, the ST presented. for translation was either fully illustrated. or accompanied. by a list of terms and phrases for inscription in figures. Orders were placed. for translating the verbal text; terms for inscription were to be provided. on a separate piece of paper. The translator left blank space for the figures in the TT. Typically, the figures were then pasted. into the TT at the customer’s office. Differences in ST and TT volumes were rarely critical since figures could be arranged. fairly freely.

In the 1990s, customers began to furnish the illustrated. ST in electronic format. To produce the TT the translator overwrites the ST and translates figure inscriptions as appropriate. Since the ST layout is to be preserved., considerable restraints may be imposed. on the TT volume if the space provided. is inadequate for the target language (TL). Typically, space restrictions impact on Russian TTs translated. from German or English STs. In such cases, either the verbal text has to be shortened. or the layout changed.. However, difficulties are encountered. with both these options when ST and TT are laid out in columns.

To date, there has been no change to this traditional method of reproducing ST figures in every new TT. By and large the only concession made to the target culture is that figures are inscribed. in the TL.

Illustration design for multilingual brochures depends on whether the figures are common to all versions or whether they are to be inserted. into each version separately. Figures applicable to all versions have multilingual legends placed. next to them. TL legends may also be set at the beginning of the different versions. Using a key and legend system is a typical German and Russian way of explaining items in a figure. Figures arranged. within the different versions may also be provided. with TL inscriptions – a common technique found in British and American manuals. Some figures have neither legends nor inscriptions. On the whole, it may be said, that the challenges of multilinguality have given rise to some changes in illustration design: preparing figures for multilingual texts aims to neutralize, rather than localize them in the sense of adapting them to target culture conventions. This is especially true for texts addressed. at a multinational non-expert audience.

## 2 Target cultural localization of figures in an engineering book

In the course of my research, I found only one case where figures were actually adapted. to target culture conventions: the Russian translation of a manuscript for a German book on Direct Red.uction (cf. 1.1 [A]). The manuscript was translated. in Moscow. The figures were localized. in the target culture before the book was published.. Figure features were adapted. to Russian conventions as follows:

### 2.1 Segmentation of figures

Keys and legend are typically used. in German and Russian technical writing to identify items of a figure. Figures most often carry inscriptions in British and American technical texts.

The illustration of the Midrex red.uction furnace given in Fig. 1 shows the two different conventions. The original German manuscript as well as the English translation contain figures with English inscriptions (Fig. 1a, LH<sup>2</sup>).

In the Russian book, however, inscriptions were replaced. by item numbers used. as keys and explained. in a legend (Fig. 1b+c, RH). This meant that not only were original full page figures red.uced. in size, but they were also adapted. to suit common practice in Russian technical writing.

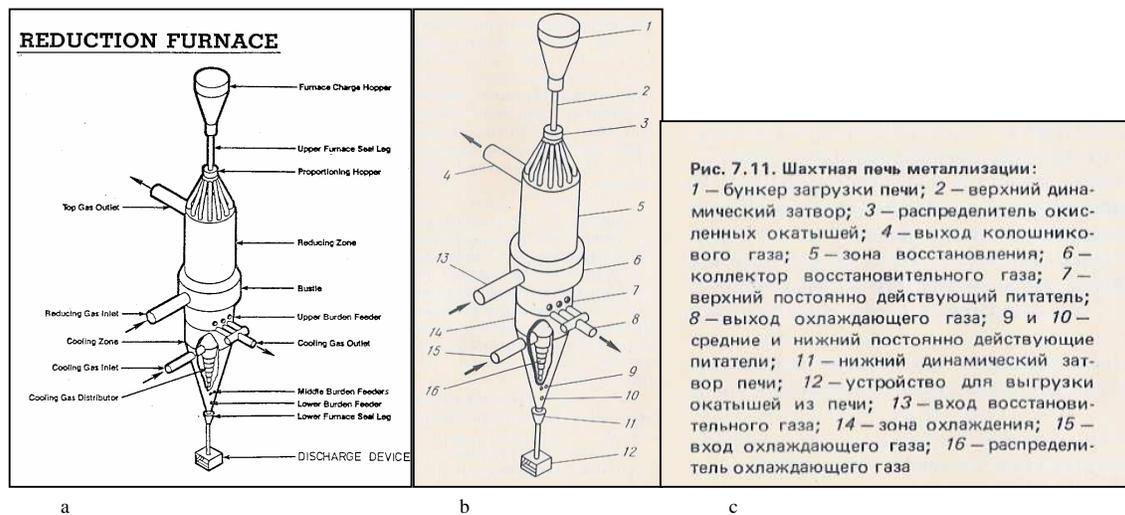


Fig. 1: Changing inscriptions to keys and legend<sup>3</sup>: Fig. 1a: LH part, Fig 1b: RH part, Fig. 1c: RH part, legend

<sup>2</sup> We assume these illustrations originate from Midrex Corp. (Charlotte, NC), who developed. the gas red.uction process dealt with in this chapter (cf. 1.1 A).

<sup>3</sup> Reproduced. by kind permission of Dietrich Werner (LH illustration).

## 2.2 Types of figures

All photographs and four engineering drawings were omitted. in the Russian TT; one chart, which is not part of the ST, was added.. These changes can be seen in Fig. 2.

Engineering drawings constitute one of the figure types clearly favored. in Russian technical texts. Therefore, we can only speculate on the reason for their omittance. These are sectional drawings of process equipment; perhaps, the internal fittings were not to be revealed. in such detail. By contrast, it is common Russian practice to omit photographs (as it was in the USSR era when it was prohibited. to take photographs of industrial installations, let alone publish them).

## 2.3 Linkage to verbal text

Reference is made to each figure at least once in Russian technical writing. This is what I call a **textual link**. German, British and American texts often contain a large number of figures with no references to them at all. They are linked. to the verbal text by the common topic only. In this case, linkage is not textual, but **topical**.

The German book chapter as well as the English TT include several figures of this kind (Fig. 3). To bring the Russian TT into line with conventions, the translator changed. topical links to textual ones by adding the references missing in the German ST. This measure is a further step towards localization of figures.

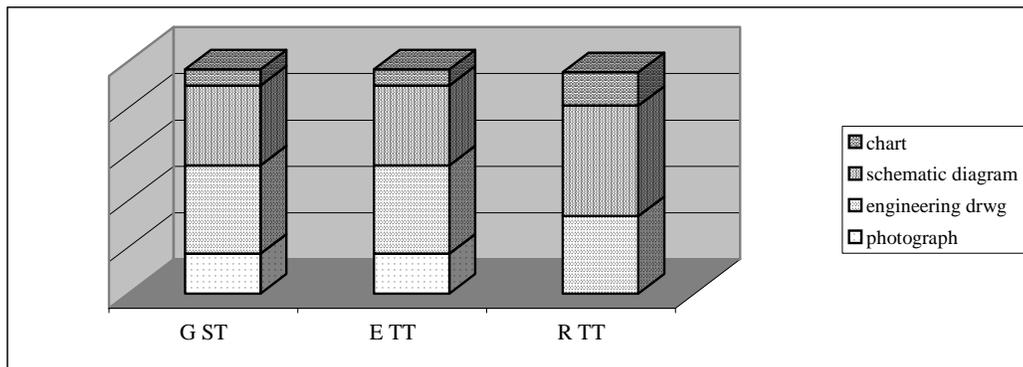


Fig. 2 Localization of types of figures

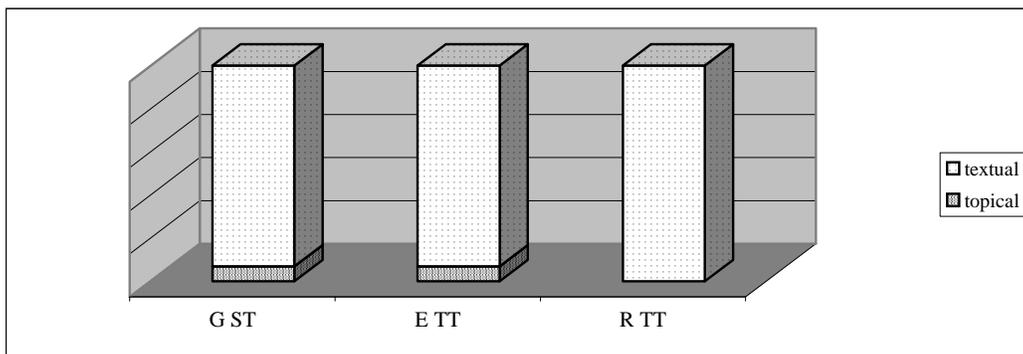


Fig. 3: Localization of linkage to verbal text

### 3 Source cultural handling of figures in manuals for specialist addressees

In this section I wish to present the results of my analysis of manuals for expert addressees [cf. 1.1 [B]]. The charts to follow consist of two parts: they show features found in manuals for industrial machinery (LH, M) and for measuring instruments (RH, I). Within the groups, preferences found in German STs are indicated. by the bar to the left; these preferences are replicated. in English, French, Spanish etc. TTs which is demonstrated. in the middle. Preferences as reflected. in manuals of American and British origin are shown by the bar on the right.

In the light of these results, there is every reason to believe that, apart from verbal text translation, multilingual brochures for equipment exported. from Germany are not written to suit their target cultures, but that the source culture text is the key for TT conventions.

#### 3.1 Segmentation of figures

Keys and legends are applied. for identifying items in figures in English, French and other TTs. This seems to agree with French practice (but still has to be confirmed. by detailed. analysis). As already mentioned., inscriptions are preferred. in British and American manuals.

#### 3.2 Captions

Examining manuals for German industrial machinery included. in a brochure with several translations (Fig. 4, LH), we find that less than half of the figures have captions. This is absolutely in line with standard practice as reflected. in US and UK manuals from mechanical equipment manufacturers.

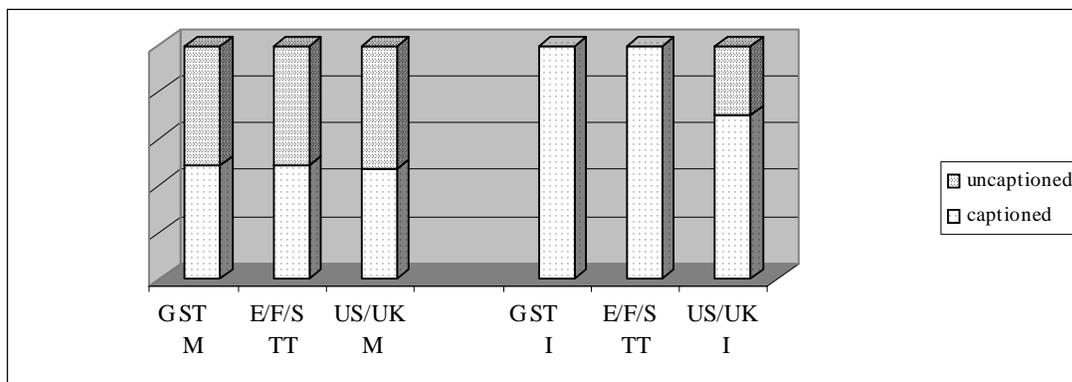


Fig. 4: Captions according to ST

By contrast, all figures in manuals from German manufacturers of measuring instruments are captioned. (Fig. 4, RH). Since this feature is reproduced. in every translated. copy, the English TT, for example, is inconsistent with text type conventions for American and British manuals, where some of the figures typically remain uncaptioned..

### 3.3 Types of figures

Standard practice in Germany favors the inclusion of engineering drawings in manuals for industrial machinery and measuring instruments (Fig. 5). These engineering drawings are then carried over into the TTs.

British and especially American manuals for machinery contain numerous photographs (Fig. 5, LH); schematic diagrams are preferred in manuals for measuring instruments from both these countries (Fig. 5, RH). When German STs are translated into English, we find that the TTs are packed with engineering drawings – showing a pronounced convention mismatch.

### 3.4 Projection methods used in dimensional drawings

Hoischen (2003:55) points out that the most informative view has to be the front view in engineering drawings. This is also known as the **main view**. “First-angle projection is the commonly accepted method in many European countries” (EB 1981:974). Formerly known as **ISO E (European) projection** and currently named **projection method 1 (PM 1)**, first-angle projection is established practice in Germany. With this method, views are arranged opposite to their actual position (Fig. 6), i.e. top view (b) is located below, bottom view (e) above the main view.

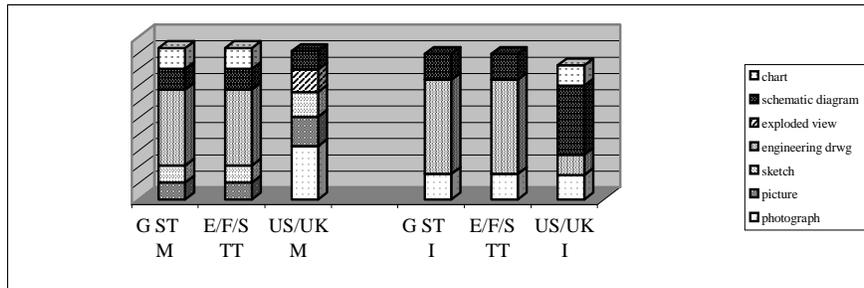


Fig 5: Types of figures according to ST (preferences)

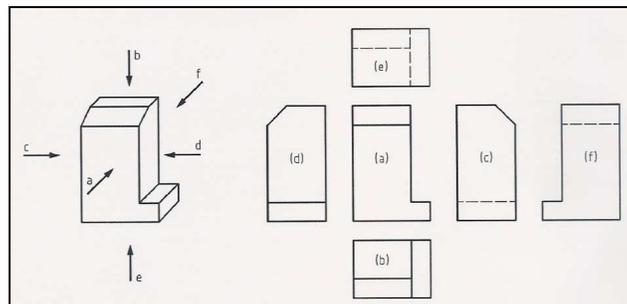


Fig. 6: First-angle projection (DIN ISO 128-30, Figure A.1)<sup>4</sup>

<sup>4</sup> Reproduced, by kind permission of DIN Deutsches Institut für Normung e.V. who requested, that the following be added, to this note: “The definitive version for the implementation of is standard is the edition bearing the most recent date of issue, obtainable form Beuth Verlag GmbH, 10772 Berlin, Germany”.

Apart from the front or main view, dimensional drawings from German machine manufacturers usually include the LH side view. As can be seen in Fig. 7, this is shown on the RH side of the main view.

This type of dimensional drawing is common in Germany and, therefore, does not need to be commented on. However, the issue of concern here is that a German dimensional drawing reproduced unaltered in an English TT for readers in the US might be open to misinterpretation since “third-angle projections are the prevalent type used in the USA and Canada” (Wikiped.ia: 3).

US engineers are said to prefer third-angle<sup>vi</sup> projection, formerly known as **ISO A (American) projection**, and nowadays called **projection method 3 (PM3)**. In this method, views are arranged according to their position, i.e. the top view (b) is located above the main view, the LH side view (c) on its LH side (Fig. 8). In order to adapt German dimensional drawings to US conventions, the location of the LH side view would have to be changed. However, this recommendation seems to be of a merely theoretical nature.

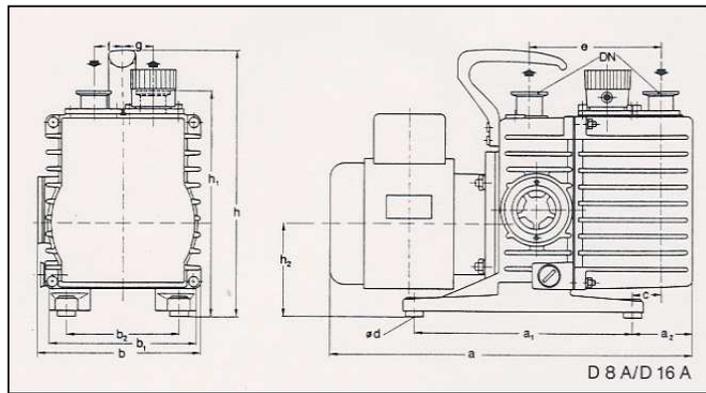


Fig. 7: PMI – LH side view on RH side of main view<sup>5</sup>

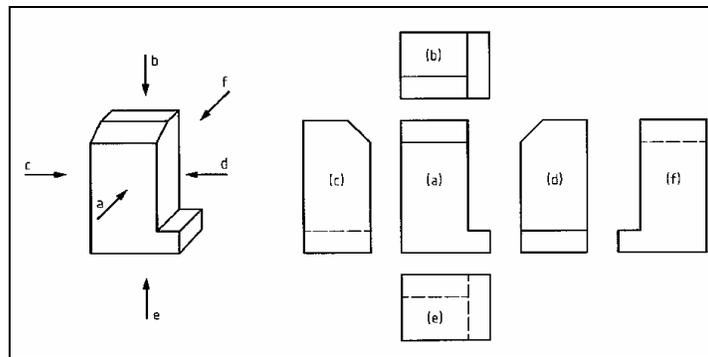


Fig 8: Third-angle projection (DIN ISO 128-30, Figure B.1)<sup>6</sup>

<sup>5</sup> Reproduced by the kind permission of Leybold Vacuum GmbH.

<sup>6</sup> “The term ‘third-angle’ is used because, compared to ‘first-angle’ projection, the directions of projection are rotated through two right angles about the object” (Wikiped.ia:3).

Dimensional drawings are extremely rare in manuals originating in the US. I was unable to find a single example of third-angle projection in the respective corpus: for example, first-angle projection was applied. in two of the drawings, and in another drawing, front, rear and side views were arranged. vertically on top of one another. Obviously in these cases, the purpose of arranging the views as described. was to make the best possible use of the available space, rather than to follow any particular projection method.

Since dimensional drawings are designed. to give dimensions for installation, inconsistencies of this kind are not likely to cause any problems in practice. However, should they occur in working drawings, a laterally reversed. product might be manufactured. as a result! Therefore, DIN ISO 128-30 (2002:9 resp. 11) and DIN ISO 5456-2 (1998:3 resp. 4) standards specify that the projection method shall be indicated. on drawings using graphical symbols.

### **3.5 Linkage to verbal text**

In contrast to the translation of the Russian book mentioned. earlier, there is no change to linkage between verbal text and figures in multilingual manuals from German manufacturers.

It is very common in manuals for machinery manufactured. in Germany to mark individual items in figures and refer to them from the verbal part of the text (Fig. 9, LH). The key and legend system is used. in these cases (cf. 3.1). Consequently, when a German manual is translated. into English, a host of references to items appear in the TT. This goes against conventions in US and UK technical writing, where inscriptions are used. and figures are more frequently referred. to as complete entities, if at all. Given the fact that nearly 50 % of figures are topically linked. to the verbal text in American and British originals, there is a conspicuous lack of topical linkage in English TTs.

In English translations of manuals for German instruments (Fig. 9, RH) the frequency of references to items may be considered. adequate, references to figures are less frequent and figures with topical linkage are more frequent than in US/UK originals.

## **4 Source cultural handling of figures in manuals for non-expert addressees**

The assertion that the various translations reflect ST conventions only is also true for multilingual brochures addressed. to non-expert readers [cf. 1.1 [C]]. This section deals with multilingual brochures from Japanese enterprises with global affiliations. In a preliminary remark in one of its brochures, Fujitsu indicates that the brochure was prepared. by Fujitsu Computers Ltd., UK. In brochures from other manufacturers there is no information as to where the brochure was produced.. And obviously, this remark in itself, does not mean to say that the English version was drafted. following British conventions. Figure features are extremely similar to those in other user guides of Japanese origin and seem to have little in common with British manuals for non-expert addressees. Evidence could only be provided. by analyzing British user guides for computer hardware which could not be made available for this analysis. The first text in a multilingual brochure is usually written in the language of its source culture. In brochures from Japanese manufacturers the first text is the English manual, which may have served. as the ST for producing the other language versions. As a

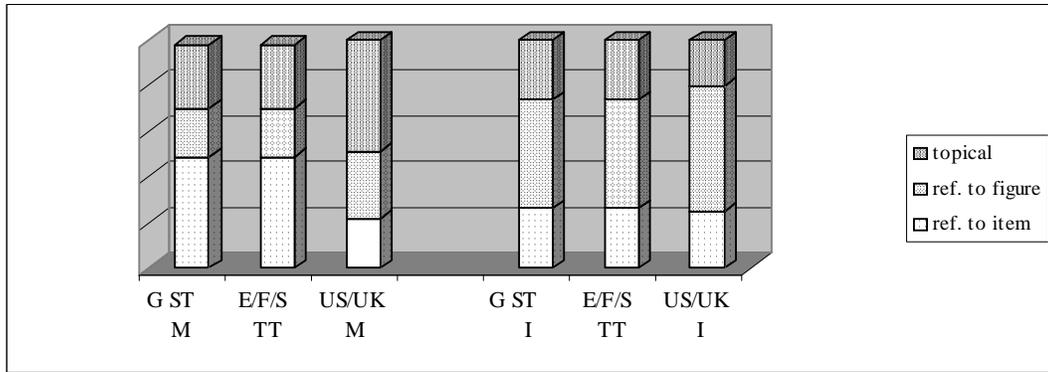


Fig. 9: Linkage to verbal text according to ST

matter of fact, we do not know what conventions to expect here, because typically these brochures do not contain a Japanese version.

Again, the charts are divided into two parts: the LH group shows features of manuals for Japanese office equipment<sup>7</sup> (J M) set against manuals for German (G H) and American/British household appliances (US/UK H). The RH group shows features of user guides for Japanese consumer electronics (J E) set against user guides for German (G E) and US products. We can examine user guides of Japanese origin in two ways: (a) compare the English language versions to texts of US/UK origin to determine whether or not their features comply with US/UK conventions, (b) compare the German language versions to texts originating in Germany.

#### 4.1 Segmentation of figures

Item numbering and TL legends are deployed in figures common to all language versions in multilingual brochures of Japanese origin. A full view of the appliance or device, which is often set before the English text, is usually presented in this way. Figures set in the various versions, however, are inscribed in English, in the given TL or not at all.

#### 4.2 Captions

Figures with captions are an exception in English manuals for Japanese products (Fig. 10). As already mentioned, German, French, and other language versions follow this pattern, whereas in the German originals of multilingual brochures for household appliances more than 50 % of the figures are captioned. (LH). Since uncaptioned figures are even less frequent in manuals originating in the US and UK, the English version is therefore as inconsistent with conventional practice as is the German one.

If we take user guides for Japanese consumer electronics (Fig. 10, RH), we see that as far as captioning is concerned, the German versions come fairly close to the originals whereas English language versions, again, contain too many uncaptioned figures.

<sup>7</sup> Since manuals for Japanese household appliances were not available, these texts are considered the closest possible equivalents for the following reasons: (a) portable copying machines and household appliances are manufactured by the mechanical technology industry, and (b) the manuals in both cases are for non-expert users.

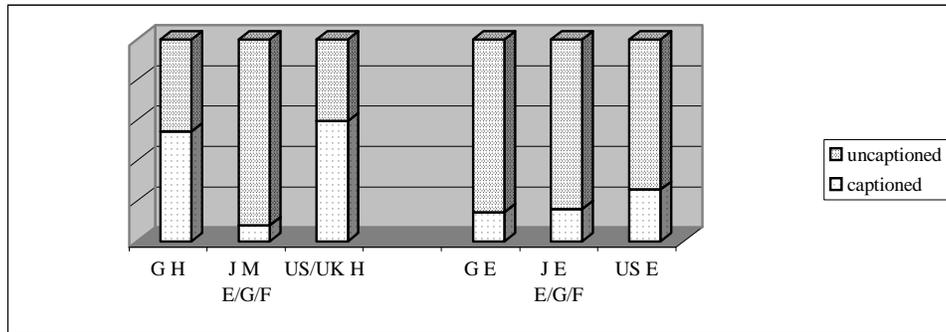


Fig. 10: Captions according to the English version

### 4.3 Types of figures

**Pictures** and **sketches** as classified by Horn-Helf (2004:297) are the main types of figures found in user brochures for Japanese products. To illustrate the differences between these two types, an example of each type is given in Fig. 11.

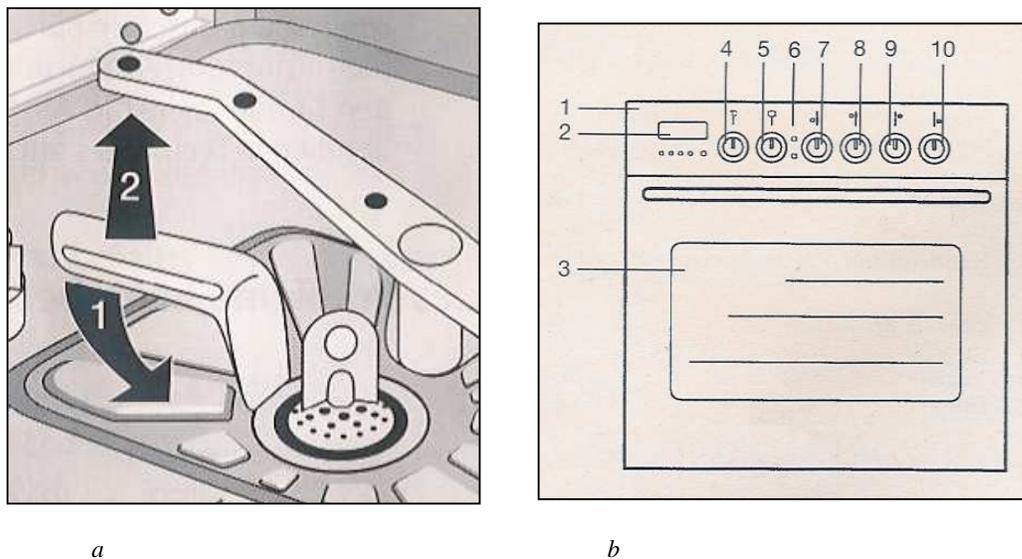


Figure 11: Classification examples: Fig 11a: “picture” (LH), Fig 11b: “sketch” (RH)<sup>8</sup>

According to this classification, a **picture** is a drawing (as opposed to a photograph) which gives the impression of being realistic despite the abstraction of some details. The picture is a non-orthographic projection which gives it spatial depth; shading is sometimes applied to enhance the sense of realism.

A **sketch** is a line or outline drawing (which Ballstaedt 1996:198 calls a “Strich- oder Umrisszeichnung”) where only forms and contours are preserved. The key difference between a **sketch** and a **picture** is dimensionality. A sketch is a 2D front view of an object's

<sup>8</sup> Reproduced by kind permission of AEG Hausgeräte GmbH (LH illustration) and EFS Hausgeräte GmbH – EBD, FORON und Seppelfricke – (RH illustration), respectively

contours. It lacks the spatial dimension rendered in a picture by means of perspective and shading.

According to Fig. 12 cultures also differ widely in the types of figures they use in their manuals. The only form used in all versions of user brochures for Japanese office equipment (J M) is the picture (LH). Pictures also prevail in manuals for household appliances written in the US/UK; sketches are used as well. Visual information is predominantly presented in photographs in manuals originating in Germany (G H).

The primary form of presenting visual information is a picture in user guides for Japanese consumer electronics; sketches are also fairly common (RH, J E). As opposed to original guides, German and English language versions contain an over abundance of sketches, and there are practically no photographs.

#### 4.4 Linkage to verbal text

In multilingual manuals for Japanese office equipment (J M) figures are very seldom linked to the verbal text by references (Fig. 13, LH). The majority of links are by shared topic, i.e. linkage is preferably topical. This feature is reflected in all text versions. If the German translation were to be adapted to suit German conventions (G H), a whole series of references would have to be added. In the case of English translations for US/UK readers the number of references would have to be tripled!

The opposite holds for user guides for Japanese consumer electronics (Fig. 13, RH). Most of the figures in the English and other language versions are linked to the verbal text by means of references (J E). In guides originating in Germany (G E) or the US (E) textual links are much less frequent. Consequently, German and English versions are inconsistent with German and American conventions (a considerable increase in topical linkage would be needed to rectify this inconsistency).

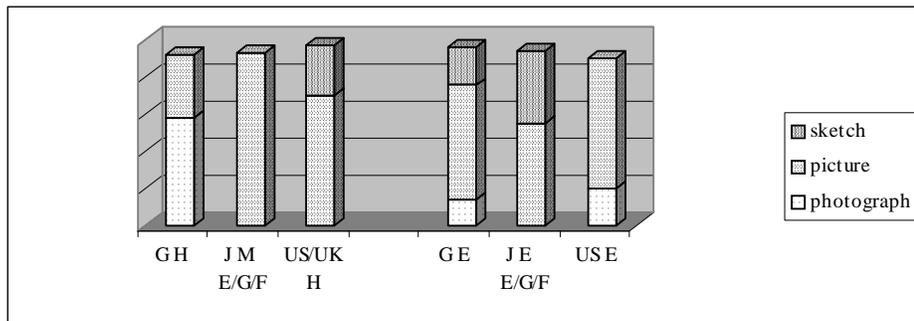


Fig. 12: Types of figures according to the English version (preferences)

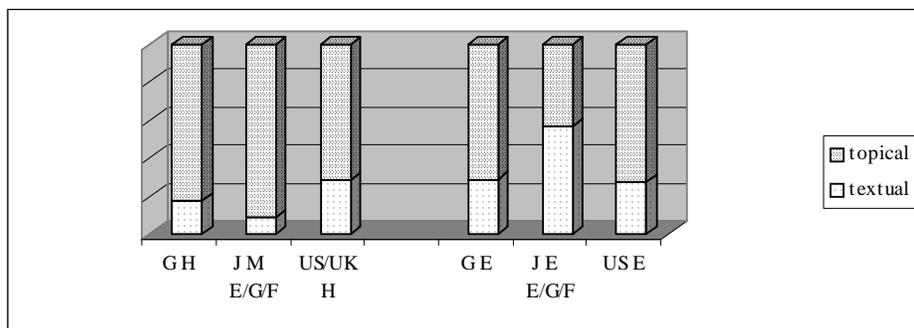


Fig. 13: Linkage to verbal text according to the English version

## 5 Conclusion

The answer to the question as to whether or not figure features are adapted to the target culture's conventions seems to depend on where the texts are translated. When they are translated in the target culture, there is evidence that measures for adapting figures to text type conventions are actually taken. However, if the texts are translated in, or under the auspices of, the source culture, we find that only inscriptions in figures are sometimes translated. As for the rest, we can fairly say that, when German manuals are translated into English or other languages, figure features in any of the TTs follow German conventions.

By the same token, the German language version found in brochures from Japanese manufacturers follows the conventions of the English text – which may be considered a TT as well. Obviously in this case the underlying conventions invoked are neither of UK or US origin, but are of unknown origin.

In other words, regardless of manufacturers' nationalities or fields of business and of whether the texts are addressed to expert or non-expert audiences, it is current practice in drafting brochures to merely reproduce the figures in all language versions. There is every reason to believe that this is standard practice in Germany, Japan, France and the US, and probably further afield as well.

What measures can be taken to promote the application of target cultural conventions in the translation process? The efforts in this direction that we found in the chapter from the Russian book mentioned above provide us with a starting point, provided that customers are interested in encouraging or making the necessary alterations to their texts. Otherwise, localization of figures will definitely be restricted to adding references and captions as appropriate. Generally speaking, types of figures are not suited for adaptation to the target culture's conventions. Engineering drawings and schematic diagrams (cf. Fig. 5), for instance, are not interchangeable due to their different content. In fact, localization of content-related features has proven impractical more than once (Horn-Helf 1999; 2003; 2004). Attempts at adapting such features have failed because (a) the ST would have to be rephrased, or (b) considerable damage would be caused to the TT, thus impairing its intelligibility.

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## How is Culture Rendered in Subtitles?

### Contents

- 1 Introduction
- 2 Extralinguistic culture-bound references
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### Abstract

This article investigates the translation problem, or crisis point, which may be caused by an Extralinguistic Culture-bound Reference (ECR), with particular focus on subtitling. A model is proposed, wherein all strategies available to the subtitler are listed. These are Retention, Specification, Direct Translation, Generalization, Substitution, Omission or the use of an Official Equivalent. The model also investigates the subtitling process, in that the parameters that influence the subtitler's choice of strategy are explored. These parameters are Transculturality, Extratextuality, Centrality of Reference, Intersemiotic Redundancy, Co-text, Media-specific Constraints and Paratextual Considerations. Finally, it is proposed that it is unlikely that a truly unsolvable culture-bound translation problem would exist.

### 1 Introduction

When analyzing translations for the purpose of uncovering the underlying norms in the tradition of Descriptive Translation Studies (Toury 1995), it is advantageous to study certain features that can be seen as symptomatic of these norms. These features can be called translation crisis points, and examples of these are puns, poetry, quotations or allusions. What they have in common is that they present translation problems; they constitute turning points, at which the translators have to make active decisions, and these points are thus indicative of overall strategy and to what norms the translator professes. Translation crisis points in Source and Target Texts also constitute “coupled pairs” in Toury's sense (1995: 38). At these points, norms that normally are hidden or unconscious are thrown into relief. Granted, it is important to be aware that the translation crisis points only indicate what norms have been operative and then to proceed by analysing longer stretches of texts, but it gives the analyst a starting point.

One of the most revealing translation crisis points is when some reference to the Source Culture is made, and there is no obvious official equivalent. The translation crisis point caused by a cultural reference reveals the workings of many norms, such as domestication vs. foreignization, degree of functionalism, awareness of skopos etc. This paper proposes to put forward a tentative model for analysing how cultural references are rendered in translation in general and subtitling in particular.

## 2 Extralinguistic culture-bound references

The proposed model is based on data from the investigation of one hundred Anglophone films and TV-programs and their Scandinavian subtitles in a project called *Scandinavian Subtitles* (cf. Pedersen 2003b). As this corpus is too extensive to be analyzed in its entirety, a feature causing translation crisis points was chosen to indicate what norms had been dominant in the production of the subtitles. I call this feature Extralinguistic Culture-bound reference (ECR), and it is defined as follows:

Extralinguistic Culture-bound Reference (ECR) is defined as reference that is attempted by means of any culture-bound<sup>1</sup> linguistic expression<sup>2</sup>, which refers to an extralinguistic entity<sup>3</sup> or process, and which is assumed<sup>4</sup> to have a discourse referent that is identifiable to a relevant<sup>5</sup> audience as this referent is within the encyclopedic knowledge of this audience.

In other words, ECRs are expressions pertaining to realia, to cultural items, which are not part of a language system. The language issue is of course a complex issue, as, depending on your standpoint, everything, some things, or nothing is purely intralinguistic. The present model aims for a middle-of-the-road point of view, in which some things are intralinguistic and some are not. The same is true for the issue of culture. Is language culture and vice versa? These are highly complex issues and they go beyond the scope of this paper, which is operationalized by a simple demarcation line by using standard reference works such as the Oxford English Dictionary ([www.oed.com](http://www.oed.com)).

This means that the study of intralinguistic culture-bound references, such as idioms, proverbs, slang and dialects are not included in this model, even though it is possible that the model could be modified for the study of those as well.

## 3 Previous studies

### 3.1 Culture

There have been a few studies of how cultural elements are translated, from general translation studies, such as Hatim (1997), to studies dealing with culture in audio-visual translation, such as Nedergaard Larsen (1993) and Orrevall (2004).

The best-known investigation of the translation of cultural elements to date is probably Leppihalme's studies of allusions and how they cause "culture bumps" (1994, 1997, 2000). The present model owes much to her work. It should be pointed out, though, that even though the object of study is similar and overlapping in many ways, it is not identical. Her allusions cover a wider area than the ECRs do, in that they cover intralinguistic cultural expressions as well, and also what she calls "key phrase allusions" (1994: 10) which are not part of the present model. ECRs are, on the other hand, a wider notion than her allusions, as they refer to

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<sup>1</sup> In a very wide sense of the word, including geographical names etc.

<sup>2</sup> Regardless of POS, syntactic function or size.

<sup>3</sup> Including fictional ones.

<sup>4</sup> As implied in the speech situation.

<sup>5</sup> E.g. a TV programme's primary target audience.

anything that is extralinguistic and culture-bound, and not just other texts, which would be the case of allusions. Intertextuality is thus not a prerequisite for inclusion in the category of ECRs.

### **3.2 Translation strategies**

The list of previous studies uncovering translation strategies is long indeed. One of the earliest attempts at classifying translation strategies known to this author is Vinay and Darbelnet (1958/2000), who displayed an impressive array of possible translation strategies, but who left out some strikingly common techniques, such as Generalization, a strategy which has been debated (and often denounced) ever since by scholars from Levý (1967/2000) to Venuti (1995). The taxonomy of translation strategies in the present model is perhaps inevitably somewhat similar to that of Leppihalme (1994: 94), and also to that of Nedergaard Larsen (1993: 219), but it makes finer distinctions.

## **4 Strategies for rendering ECRs**

Instead of ‘translate’, the verb ‘render’ will henceforth be used about the different strategies involved in transferring ECRs from a Source Text (ST) to a Target Text (TT), as not all of the strategies actually involve translation.

In this model, the strategies for rendering ECRs into a Target Language are arranged on what might be called a Venutian scale, ranging from the most foreignizing to the most domesticating strategies (cf. Venuti 1995). Having said that, however, the Venutian terms will be abandoned, as they are somewhat counterproductive when translating from English into smaller languages such as the Scandinavian ones. Instead, the more neutral labels ‘Source Language (SL) oriented’ and ‘Target Language (TL) oriented’ will be used. The taxonomy is based on descriptive observations of norms underlying subtitling, but it could easily be adapted to suit other forms of translation as well.

### **4.1 Official equivalent**

The strategy of using an Official Equivalent is different in kind from the other strategies, in that the process is bureaucratic rather than linguistic. Following the spirit of Hermans reasoning about “authentication” (2003: 39), for there to be an Official Equivalent, some sort of official decision by people in authority over an ECR is needed. A typical example of this would be the fact that ‘Donald Duck’ is called ‘Kalle Anka’ in Swedish, and there is no translation-related reason for rendering ‘Donald Duck’ in any other way. There may be other reasons, however, such as the time-and-space constraints of subtitling. Apart from “the executive decision”, an Official Equivalent may come into existence as a “standard translation [...] a preformed TL version” (Leppihalme 1994: 94). It could be said that this “preformed TL version” is evidence of the ECR having entered the TL. The pivotal point about Official Equivalents is that when one exists, it is highly unlikely that you would have a translation crisis point, as there is a pre-fabricated solution to the problem.

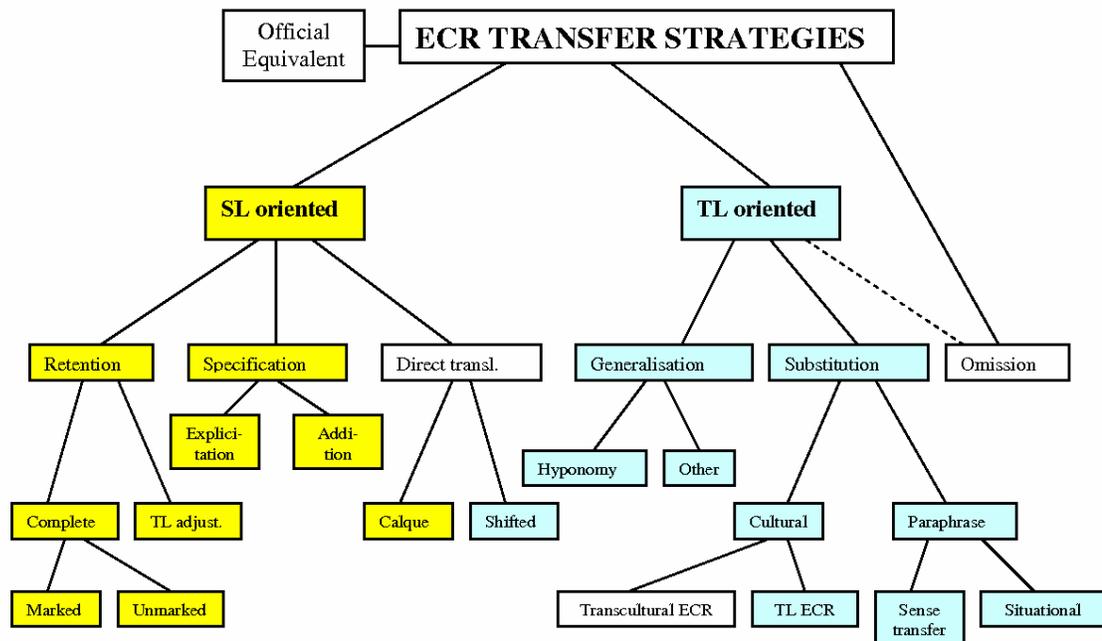


Fig. 1: Taxonomy of ECR transfer strategies

## 4.2 Retention

Retention is the most SL-oriented strategy, as it allows an element from the SL to enter the TT. Sometimes the retained ECR is marked off from the rest of the TT by quotes and occasionally by italics; the difference seems to be whether the ECR is a proper noun (unmarked or in quotes) or not, in which case the ECR may be marked by italics. There appears to be much inconsistency, though. The ECR can also be adjusted slightly to meet TL conventions, by adjusting the spelling or dropping an article. This is by far the most common strategy for rendering ECRs. It is however not the most felicitous way of solving an ECR crisis point that involves a Monocultural ECR (see section 5.1. below), as it offers no guidance whatever to the TT audience. In one sense, Retention would be the strategy that displays the most fidelity towards the ST, as the translator is true not only to the spirit, but indeed every letter of the ST.

## 4.3 Specification

Specification means leaving the ECR in its untranslated form, but adding information that is not present in the ST, making the TT ECR more specific than the ST ECR. This is done in one of two ways: either through Explicitation or Addition.

### 4.3.1 Explicitation

Explicitation is here used in a very restricted sense. Explicitation could be seen as any strategy involving expansion of the text, or spelling out anything that is implicit in the ST. In

the present model, however, Explicitation means that the added material is latent in the ST ECR, as part of the expression side (the name) of the ECR. Examples of this are the spelling out of an acronym or abbreviation (often combined with other strategies), the adding of someone's first name or the completion of an official name to disambiguate an ECR for the Target Culture (TC) audience, which may not be as familiar with the ECR as the original Source Culture (SC) audience is.

#### 4.3.2 Addition

This means that the added material is latent in the ECR, as part of the sense or connotations of the ECR. By using this strategy, the translator intervenes to give guidance to the TC audience. This can be seen in the Swedish subtitles of example (1), where a character (David Brent) in *The Office* names someone who has had an influence on his life:

(1) Ian Botham

**Cricketspelaren Ian Botham**

(The Office9: 1.31)

Botham would be virtually unknown to most Swedes, so by adding 'cricketspelaren' ("the cricket player"), the Swedish subtitler has rendered this ECR in a way that has made it more accessible to the Swedish audience. The drawbacks of this strategy are that it is space consuming and could be regarded as patronizing.

#### 4.4 Direct translation

This strategy could hardly be used on proper names, but it is not uncommon for rendering the names of companies, official institutions, technical gadgetry etc.

Unlike the strategies of Specification and Generalization, the semantic load of the ST ECR is unchanged: nothing is added, or subtracted. There is no effort made to transfer connotations or guide the TT audience in any way. In the present model, the strategy is divided into two subcategories, based on the outcome of the strategy: Calque and Shifted. A Calque would be the result of stringent literal translation and it may appear exotic to the TT audience. An example of this is the Danish subtitles of example (2):

(2) Captain (of police)

**politi-kaptajn**

(Midnight Run: 51.38)

A 'Captain of police' would more often than not be rendered by using some corresponding Danish title, such as 'kommissær'. The Calque in (2) would definitely seem odd to the TT audience. The only shifts that are made when a Calque is produced are obligatory ones, required by the differences between SL and TL (cf. Vinay & Darbelnet: 1958/2000: 88). It is more common, and less SL-oriented, for translators to perform some optional shifts on the ST ECR that makes the ECR more unobtrusive (Shifted Direct Translation). Thus, the strategy of Direct Translation straddles the fence between the SL and the TL-oriented strategies, between the exotic and the domestic.

## 4.5 Generalization

This strategy (which typically, albeit not necessarily<sup>6</sup>, involves translation) means replacing an ECR referring to something specific by something more general. Typically, this involves hyponymy, but in a wide sense, as the form of the TT ECR may retain uniqueness of referent, as in example (3), (where a particular brand of volleyball has been replaced by a Danish hyperonym meaning “the brand of the ball” (definite)) or not, as in example (4) (where the name of a particular café has been replaced by a Swedish hyperonym meaning “a café”(indefinite)).

(3) Voit

**boldmærket**

(Meet the Parents: 58.59)

(4) the Corinth coffee shop

**ett kafé**

(Meet Joe Black: 37.20)

There are similarities between the strategies of Generalization and of Addition, in that the information added in Addition often is a hyperonym. This can be seen in example (1) above, as ‘cricket player’ could be said to be a hyperonym of Ian Botham: there are many cricket players and one of their number is Ian Botham. Thus, Addition could be said to be the result of Generalization + Retention. The difference between the strategies is linguistic and based on the perspective of the ST ECR. In Generalization, there is an upward movement on a hyponymy scale, producing a TT item that is less specific than the ST ECR. When using Addition, the movement goes in the opposite direction, and the technique involves not as much hyponymy as meronymy<sup>7</sup>. The person known as ‘Ian Botham’ is many things besides being a cricket player. For instance, he is a charity worker, a rogue, an Officer of the British Empire, a husband and so on. Yet, the TT ECR disregards all other parts of Botham’s persona, focussing only on his being a cricket player. Thus, the TT ECR is more specific than the ST ECR.

## 4.6 Substitution

This strategy involves removing the ST ECR and replacing it with something else, either a different ECR or some sort of paraphrase, which does not necessarily involve an ECR.

### 4.6.1 Cultural substitution

The strategy of Cultural Substitution means that the ST ECR is removed, and replaced by a different ECR. In the least marked form a transcultural (cf. Leppihalme 1994: 96, and section 5.1 below) ECR is used to replace the ST ECR. In these cases, the ECR would be an ECR that could be expected to be known by the TT audience. This is illustrated in example (5), taken from *the Last Boy Scout*. The speaker’s car has just been blown up, and his wife asks him “Who the hell did this?” Thinking this a stupid question, as there is no way for him to know this, the speaker suggests the avuncular host of a children’s TV-program, namely:

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<sup>6</sup> Translation is not present in e.g. rendering ‘Central Park’ as **New York**, which is done by a Danish subtitle of *Jurassic Park* (45,19).

<sup>7</sup> I owe the meronymy observation to Christina Alm-Arvius.

(5) Mr Rogers

**Anders And**

(Last Boy Scout: 18.07)

Presumably because ‘Mr Rogers’ is virtually unknown in Scandinavia, the Danish subtitler has replaced him by the Danish Official Equivalent of ‘Donald Duck’, who shares with Mr Rogers the property of being highly unlikely to blow up people’s cars.<sup>8</sup> At this point, it should be mentioned that it is not at all uncommon for two strategies to combine in this (i.e. Cultural Substitution + Official Equivalent) and other ways (notably Explicitation + Direct Translation).

In a more marked form, the SL ECR is replaced by a TL ECR. This is the most domesticating of all strategies for rendering ECRs. This strategy is most often used for rendering ECRs referring to official institutions or titles. This practice has a long tradition in translation and is a fast and effective way of rendering this sort of ECR. This strategy can be illustrated by the Swedish translation of (6), where an American official institution has been replaced by a corresponding Swedish institution.

(6) the Prison Board

**kriminalvårdsstyrelsen**

(Tango & Cash: 30.53)

The TT audience seems to be used to this, and there is probably not even much awareness that the ST ECR has been replaced by a TT ECR. The evidence of this is that the Transcultural ECRs rendered in this way are lexicalized, and found in most bilingual dictionaries, which means that they could be considered Official Equivalents produced by Substitution. This does not mean that all cases of TL ECR Cultural Substitution are Official Equivalents, for two reasons. First, when the ST ECR is less well known to the TT audience (i.e. a Monocultural ECR, see section 5.1 below), there is much variability in what TT ECR is chosen, which would not be the case for an Official Equivalent. Second, the strategy is also used for made-up ECRs (i.e. Text Internal ECRs, see section 5.2. below).

When this category is used outside what could vaguely be called “the official domain” and is applied to proper names, the result could be considered an anomaly and this creates a certain credibility gap. The credibility gap is triggered by a character positioned in the SC treating a TC ECR as if it were a SC ECR. The strategy could therefore hardly be used in texts where information is the primary skopos (cf. Vermeer 1989/2000), but the strategy appears in texts that have other primary skopoi, particularly humor, as in example (7), where, in a humorous conversation based on a profusion of anagrams and abbreviations, an American agent claims to have gone to:

(7) NYU

**KUA**

(Spy Hard: 39.17)

The Danish subtitler has opted to substitute the (in America) well-known abbreviation of ‘New York University’, for the (in Denmark) well-known anagram of (a part of) ‘the University of Copenhagen’. Thus, the joke (based on a profusion of anagrams) is kept, at the

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<sup>8</sup> The cause of Donald Duck’s being unlikely to blow up cars differs from Mr Rogers as it is based on Donald Duck’s being a cartoon character, rather than because of his gentle manners.

cost of a slight credibility gap, as not many American agents receive their education at the Arts and Humanities department of the University of Copenhagen.<sup>9</sup>

## 4.6.2 Paraphrase

This strategy involves rephrasing the ECR, either through “reduction to sense” (Leppihalme 1994: 125), or by completely removing all trace of the ECR and instead using a paraphrase that fits the context.

### 4.6.2.1 Paraphrase with sense transfer

When using this strategy, the ST ECR is removed, but its sense or relevant connotations are kept by using a paraphrase. This strategy would mainly be used for solving ECR crisis points that are too complex for Generalization or Specification. An example of this is (8). In *the Fugitive*, there is a train crash and the investigating marshals are discussing what the driver of the engine may have done, and the Tommy Lee Jones character clips:

(8) I bet he did a Casey Jones.<sup>10</sup>

**Han lämnade säkert inte loket.**

(Back translation: I’m sure he didn’t leave the engine.)

(Fugitive: 20.25)

Judging that Casey Jones would be little known in Sweden, the Swedish subtitler has opted for scratching the ST ECR and substituting it by a Sense Transfer Paraphrase that retains the relevant information about this American folk hero.

The paraphrase in question may vary much in length and complexity as compared to the SL ECR. There may be an inverse relation between the length of the TT paraphrase and the degree of familiarity of the TT audience with the ECR (i.e. Transculturality, see section 5.1.). This can be illustrated by example (9), from *Midsomer Murders*, where some people are looking at pictures of:

(9) the VE Day celebrations

**Swedish subtitle: firandet av kapitulationen i andra världskriget**

(Back translation: the celebrations of the capitulation in the Second World War)

**Danish subtitle: 8. maj 1945**

(MM1: 8.54)

The crucial difference between the Swedish and the Danish audiences here is that the Danes, but not the Swedes, took part in the war, so the ECR pertaining to its ending would be more vivid in the minds of the Danish audience. The ECR in example (9), which is an ECR

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<sup>9</sup> Gottlieb (forthcoming) suggests three subcategories of this strategy, one being identical to the TL ECR above. He then suggests a subcategory for Transcultural ECRs from the SC, and Transcultural ECRs *shared* by the SC and TC. It could be argued that this difference is too fine to validate this division (his example for the latter subcategory is ‘McDonald’s’, which might also qualify for inclusion in his former subcategory). Also, a brief scan suggests that the strategy is used too rarely to validate any further subdivision. He himself does not make this subdivision for this very reason.

<sup>10</sup> Casey Jones was an American engine driver hero who is famous for remaining on his post when his train crashed, thus keeping the train on the tracks, and saving the lives of his passengers and dying a martyr. The story of CJ was disseminated by a folk song that bears his name.

crisis point for the Swedish TT audience, could be considered a Transcultural ECR for the Danish (but not the Swedish) TT audience. It is still a paraphrase, though, as the Danish Official Equivalent, 'Befrielsesdagen' ("Liberation Day"), is not used.

#### 4.6.2.2 Situational paraphrase

When using this strategy, every sense of the ST ECR is completely removed, and replaced by something that fits the situation, regardless of the sense of the SC ECR. This strategy could thus be considered a quasi-omission strategy. This method seems to be used a lot when it comes to rendering ECRs in puns.

### 4.7 Omission

As Toury has pointed out (1995: 82), Omission is a valid translation strategy, and in the present model it simply means replacing the ST ECR with nothing. There are circumstances that make Omission the only viable option (see section 5.), but it may also be opted for out of laziness. As Leppihalme puts it: "a translator may choose omission responsibly, after rejecting all alternative strategies, or irresponsibly, to save him/herself the trouble of looking up something s/he does not know" (1994: 93).

### 4.8 Discussion

As we have seen, there are many strategies for rendering ECRs into TT subtitles, not all of which involve translation and not all of which involve a TT ECR, which is generally not the case for Paraphrase and Generalization and obviously not Omission. The taxonomy in this section is based on the translation product, and illustrates how it is SL-or TL-oriented. It is also possible to view it from the perspective of the translation process. The relevant top categories (orientation) could then be replaced by the top categories of 'minimum change strategies' and 'interventional strategies' (cf Leppihalme 1994: 200). The grouping would still be very similar, as minimum change would imply that SC ECRs are retained, and intervention would in most cases lead to TL orientation. This is because it would be unlikely for a subtitler to intervene to make a TT more foreignized. Instead, intervention would be carried out to aid the TT audience, and thus to bring the text closer to the TC (cf. Schleiermacher 1813/1998: 118). Thus the minimum change strategies would be Retention, Official Equivalent and Direct Translation, and the interventional strategies would be Specification, Generalization and Substitution, with Omission sitting on the sideline as being neither. It is important to note that in real life subtitling, the strategies are often combined. It is for instance not uncommon that a ST ECR is explicitated before being directly translated. The strategies describe linguistically how ECRs are transferred from ST to TT. It does not necessarily mean that the subtitlers themselves are consciously aware of what choices they make, as part of the process may be internalized and subconscious. This is probably particularly true in the case where strategies combine; the subtitlers may not be aware that they have used more than one strategy. The same is true of what will be discussed in the next section, namely what parameters influence the decisions subtitlers make.

## 5 Influencing parameters

Some of the strategies outlined in the previous section may seem odd and it may seem as if the subtitlers are taking rather too many liberties with the ST. This is particularly true of the more TL-oriented strategies, like Cultural Substitution. However, there are many circumstances, under which it may be justified, or even necessary to use these strategies. This section contains an attempt to list all factors (or parameters) that influence the decision-making of subtitlers. Seven parameters have been generalized from the data available. It is important to note that even though they are listed separately, they are intertwined and interact to a very high degree, and may combine to aid or obstruct the subtitler in his or her work.

### 5.1 Transculturality

The most basic of all influencing parameters is that of Transculturality. The notion of Transculturality as explained by Welsch explores how cultures in the modern world “are extremely interconnected and entangled with each other” (1994: 198). This implies that many ECRs that once were familiar only to people in one culture, will now be accessible on a global scale, and are thus not very culture-bound. As applied to the present model, the degree of Transculturality of an ECR deals with how familiar it is to the ST and TT audiences. Leppihalme also deals with this parameter in her work on allusions. Her model contains a diagram of what is known in Anglophone society and what is known in Finland, and what is shared by the two cultures (1994: 96). The present model differs in that it also includes what is not generally known in either of the cultures involved. This results in three methodologically relevant levels of Transculturality, namely Transcultural ECRs, Monocultural ECRs and Microcultural ECRs.

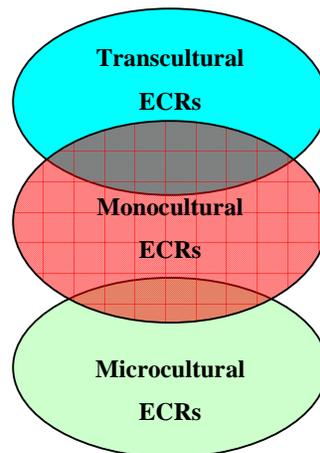


Fig. 2: Levels of Transculturality

#### 5.1.1 Transcultural ECR

A Transcultural ECR is an ECR which is not bound to the Source Culture, but which should be retrievable from common encyclopedic knowledge of the ST and the TT audiences, as it

could be assumed to be known in both the SC and the TC (e.g. ‘7-Eleven’ (*As Good As It Gets*: 32.03)) and/or belongs to a third culture (e.g. ‘Jacques Cousteau’ (*Anaconda*: 7.53)).

### 5.1.2 Monocultural ECR

A Monocultural ECR causes a translation crisis point, which arises when the referent of an ECR can be assumed to be less identifiable to the majority of the relevant TT audience than it is to the relevant ST audience, due to differences in encyclopedic knowledge.

### 5.1.3 Microcultural ECR

A Microcultural ECR is bound to the Source Culture, but it could *not* be assumed to be within the encyclopedic knowledge of neither the ST nor the TT audience, as it is too specialized or too local to be known even by the majority of the relevant ST audience (e.g. ‘19, Cranberry Street, Brooklyn’ (*Moonstruck*: 1.16.29)). In these cases, reference must instead be achieved through the context or the co-text. There would of course be a few potential members of the ST audience who would know the ECR (people living on Cranberry Street in Brooklyn, for instance), but that is not the point. The point is that the number of people who know the ECR is negligible compared to the total relevant ST audience. This difference can be ascertained by analyzing the way in which the ECR is treated in the ST.

The level of Transculturality of a specific ECR varies with some of the other influencing parameters, such as that of the assumed knowledge of the target audience, so that what is a Transcultural ECR in one text may be a Monocultural ECR in another text.

## 5.2 Extratextuality

This parameter has to do with whether an ECR exists outside the ST or not. If it does, it is Text External. If it does not, it is Text Internal. Thus, a Text External ECR is an ECR that exists in some culture, independent of the text at hand. Transcultural ECRs and Microcultural ECRs, as well as Monocultural ECR are always Text External. Conversely, an ECR is Text Internal if it is constructed for the text (or series of texts) at hand. A Text Internal ECR may be virtually indistinguishable from a Microcultural ECR (e.g. ‘Lancaster Square’ (*Truman Show*: 28.39)). This is unproblematic from a translation point of view, as both Microcultural ECRs and Text Internal ECRs must attempt to achieve reference intratextually. These two categories are purely referential and cannot have any sense or connotation beyond what can be established within the text (or series of texts) or through the intralingual sense of the words making up the ECR. This means that they are fairly unproblematic from a translation point of view, as the subtitler would have no impediment from the Text External world to limit his or her choice of translation strategy.

An originally Text Internal ECR may become a Transcultural ECR through the process of intertextuality, if it is very successful. An example of this would be ‘James Bond’ which is Text Internal when he introduces himself in *Goldfinger* (11.31), but Text External (and Transcultural) when a character compares himself to Bond in *Notting Hill* (1.45.41). This shows that Text External ECRs may very well be fictional, as long as they do not have existence in the text at hand.

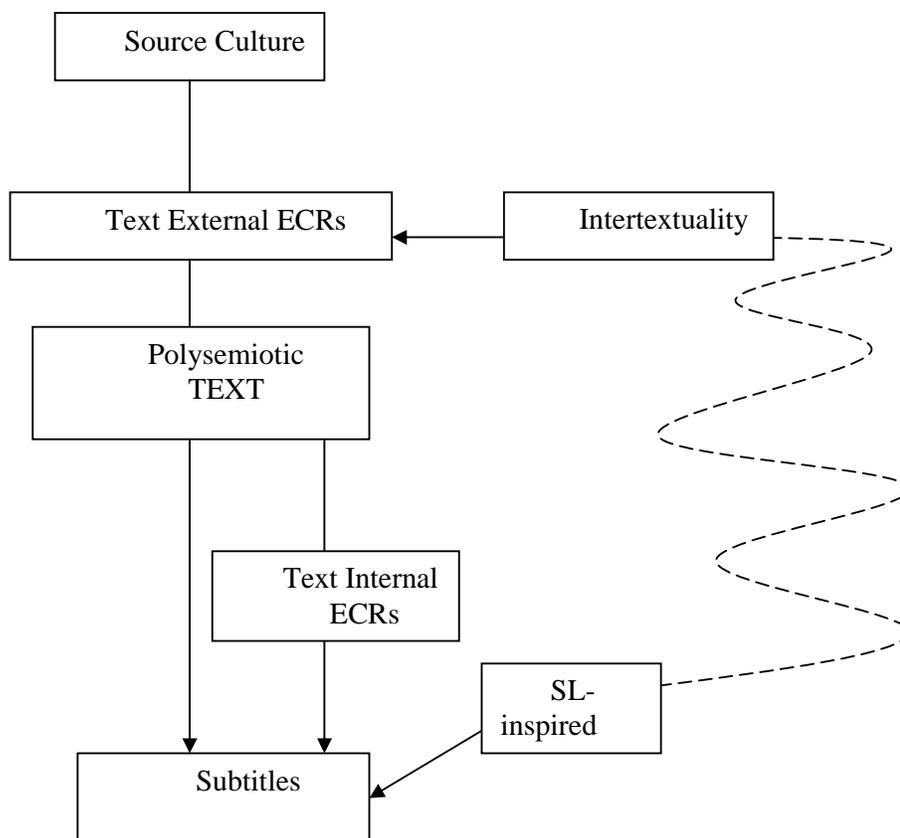


Fig. 3: Extratextuality flow chart

### 5.3 Centrality of reference

This is one of the most important influencing parameters, and it works on multiple levels. When establishing the centrality of an ECR in a text, one has to look at the ECR on at least two levels: the macro level and the micro level. If an ECR is central on the macro level, it may typically be the subject matter, or at least a very central theme of the film or TV-programme at hand. It would then be more or less impossible to render it by using any other strategy than Retention or Official Equivalent. To render the county in *Bridges of Madison County* as anything other than 'Madison' would be slightly absurd. If an ECR is just mentioned in passing a few times in the film, then the ECR would be peripheral on the macro level. The treatment of it would then depend on how central it is to local discourse on the micro level. If it is peripheral on the micro level as well, e.g. it could just be one in a long list of ECRs, then there is plenty of evidence of Omission being used, and responsibly at that. However, if the ECR e.g. carries local discourse forward, is referred to later on, or is the trigger of a joke, then it would be central on the micro level. There may then be a need for interventional strategies. In example (5) above, we saw an example of this. Even if the ECR ('Mr Rogers') is very peripheral on the macro level, appearing in the film just once, it is

central on the micro level. This is probably why the Danish subtitle chose to Substitute for it something that would be accessible to the TT audience.<sup>11</sup>

## 5.4 Intersemiotic redundancy

Subtitles differ from the common notion of TT, because they are part of a polysemiotic text. Subtitling is additive (Gottlieb 1997: 141), it adds information, unlike literary translation or dubbing (isosemiotic translation, Gottlieb 1997: 146), where the ST is replaced by the TT. Gottlieb (1997: 143) distinguishes between four semiotic channels in polysemiotic texts (e.g. films or tv-programmes): the non-verbal visual channel (i.e. the picture), the non-verbal audio channels (e.g. music and sound effects), the verbal audio channel (i.e. the dialogue) and the verbal visual channels (signs and captions). All these channels carry semiotic information, and there is often a degree of overlap, or Intersemiotic Redundancy between them. From a subtitling point of view, the greater the Intersemiotic Redundancy, the less the pressure for the subtitle to provide the TT audience with guidance. An example: if something is referred to in the dialogue and at the same time clearly visible in the picture, it may be enough to refer to it by using a pronoun in the subtitles (Generalization). It may simplify the referring process in other ways as well, as in example (10). In the film *As Good as it Gets*, the leading lady returns home to find a car carrying M.D. license plates parked outside her house. Thinking that something has happened to her asthmatic son, she becomes upset, and gasps:

(10) M.D.

**en läkarbil**

(Back translation: a doctor's car)

(As Good as it Gets: 1,04,07)

As the practice of marking physicians' cars in this way is unknown in Scandinavia, some sort of explanation would be necessary to explain why she becomes upset and how she knows that there is a doctor in her house. In this example, the verbal audio channel - her short utterance of "M.D." - is supported by a) the verbal visual channel: the license plate inscription "M.D.", and b) the non-verbal visual channel: a car is seen in the picture. This has two effects for the subtitles. First, the redundancy caused by the identical information between the two verbal channels means that the subtitle only has to subtitle the message once (normally pertinent signs in the picture are subtitled). Second, the presence of the car makes it possible for the subtitle to use the brief Paraphrase strategy in (10), instead of having to come up with some more cumbersome explanation for her behaviour, or alternatively leaving the TT audience in the dark as to the trigger for her behaviour.

## 5.5 Co-text

This parameter is fairly uncomplicated. Just as there may be overlapping information in the other semiotic channels in the polysemiotic text, there may be overlapping information elsewhere in the co-text (the dialog). If an ECR is disambiguated or explained at some point earlier or later in the co-text, the subtitle does not have to perform the task at every point.

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<sup>11</sup> The Swedish subtitlers of this film opted for Retention here, which is less felicitous, as that may lead the Swedish TT audience taking the utterance at face value, rather than as ironic, making them think that 'Mr Rogers' was the "bad guy" in the movie.

## 5.6 Media-specific constraints

The media-specific constraints of subtitling should be well known by now, and they will be outlined here only insofar as they interfere with the rendering of ECRs. For more details on these matters, the reader is referred to the works of Luyken (1991), Ivarsson & Carroll (1998), or Gottlieb (1997, 2000). Most fundamentally, there is the semiotic switch from the spoken to the written word, which means that the text gets somewhat formalized in the transfer from SL to TL. In many countries, however, subtitles are seen as a “hybrid” form, containing oral features in the written form. Nevertheless, this constraint often leads to Explicitation being used on ECRs in subtitles. Apart from the semiotic switch, there are “the famous and infamous time and space restrictions of subtitling” (Gottlieb 2004: 219), which often restrict the subtitlers’ options. Generally speaking, these options are limited by constraints such as the widely applied 12 cps rule, which means that there should be a display time of one second per 12 characters in the subtitles (equalling 36 characters for a full one-liner that would be displayed for three seconds). This means that in rapid conversation, the dialogue will be condensed. A previous study by the present author shows that the mean quantitative condensation rate is about a third in Scandinavia (Pedersen 2003a). The condensation tends to affect verbal material that is less central than ECRs however, but it means that Omission is sometimes the only viable strategy for rendering (or rather not rendering) ECRs in subtitling of rapid dialogue. On the other hand, the media-specific constraints can be low (in slow dialogue), and the subtitler may have ample time and space to use space-consuming strategies like Addition or Paraphrase.

## 5.7 Paratextual considerations

The parameters outlined thus far have in common that they can be analysed from the texts alone or from the interplay between the texts and the world. This final parameter is not *in* the text, but rather *about* the text. The parameter is centered on the translation situation (cf. e.g. Chesterman 1998: 207) and the individual considerations combine to form overall translation goals or overarching translation strategies pertaining to the text as a whole. The facts that constitute the paratextual considerations would ideally be included in Nord’s “translation briefs” (1997: 59). Unfortunately, translation briefs are extremely rare in real life subtitling, and even rarer for an analyst of subtitling to get hold of. This means that the answers to the paratextual questions often have to be sought elsewhere: from subtitlers, guidelines, subtitling companies, broadcasters, the Internet and even TV-guides. Nevertheless, it is crucial to take the paratextual factors into consideration, because in very many cases, pivotal explanations of subtitling behavior lie here.

The paratextual considerations can be broken down into a few clusters of questions, and the following are but a few examples of the most central questions in each cluster; the list is not meant to be exclusive:

### 5.7.1 Skopos-related Questions

(cf. Vermeer: 1989/2000)

- i) What are the national norms of subtitling?
- ii) What are the company’s guidelines and other in-house rules for subtitling?
- iii) Have the clients left any instructions about what sort of strategies they want?
- iv) What norms does the subtitler prescribe to?

- a) Foreignizing?
- b) Domesticating?
- c) etc.
- v) What genre is the film?
  - a) Is it a documentary? Then information is the most important aspect, and minimum change strategies could be used.
  - b) Is it a comedy? Then humor is the most important aspect, and interventional strategies may have to be used to secure punch lines.
- vi) etc.

### **5.7.2 TT Audience-related Questions**

- i) What is the age group? Do they remember e.g. ‘The Battle of the Bulge’ (if that is the ECR at stake)?
- ii) Do they have specialist knowledge? Does the program appeal only to e.g. snowboarding buffs? Then they could be assumed to be familiar with many of the ECRs pertaining to that field, hence Retention.
- iii) etc.

### **5.7.3 Broadcasting-relates Questions**

- i) When will the film be aired?
  - a) On prime time? That signals high prestige and many viewers, and there is evidence of more effort going into prime time subtitling, with the result of more felicitous solutions.
- ii) Who is the broadcaster?
  - a) Is it a public service channel? They have certain obligations towards their viewers regarding reading speed etc.
- iii) etc.

### **5.7.4 Questions related to Pragmatic matters**

- i) What may the deadlines have been? Interventional strategies take time, and the subtitler may not have had that.
- ii) What financial remuneration may there have been? Since subtitlers get paid by their quantitative output, and interventional strategies take time, and as some subtitling firms do not pay very well, there is ample evidence of some subtitlers’ not always being able to set aside the time it takes to use interventional strategies.
- iii) etc.

## **6 Conclusions**

The model presented in this paper covers the seven strategies available to subtitlers for rendering ST ECRs in subtitles: Official Equivalent, Retention, Specification, Direct Translation, Generalization, Substitution and Omission. We have also seen the seven different parameters that influence the subtitlers’ decision-making: Transculturality, Extratextuality, Centrality of Reference, Intersemiotic Redundancy, Co-text, Media-specific Constraints and Paratextual Considerations. Using this model, an analyst should be able to describe how

ECRs have been rendered in a TT and also explain why they have been rendered in this way. Applied on a significantly large corpus, this model should go a long way towards uncovering the translation norms that are operative for that corpus. It has indeed served the present author well when applied on a corpus of one hundred films and TV-programs and their subtitles. Interestingly enough, it has also illustrated a tendency about the translatability of culture in subtitles. If all seven parameters work against a subtitle: i.e. if you have a Text External and Monocultural ECR, which is central to the film, the Intersemiotic Redundancy is low, the Co-Text offers no guidance, the media-specific Constraints are high and the Paratextual Considerations has shown you e.g. that you are dealing with a general audience without particular knowledge of the subject matter of the film at hand, then none of the seven strategies may offer a solution and you may have an untransferable ECR on your hands. However, after analyzing about one hundred thousand subtitles, the present author has still to come across such an ECR.

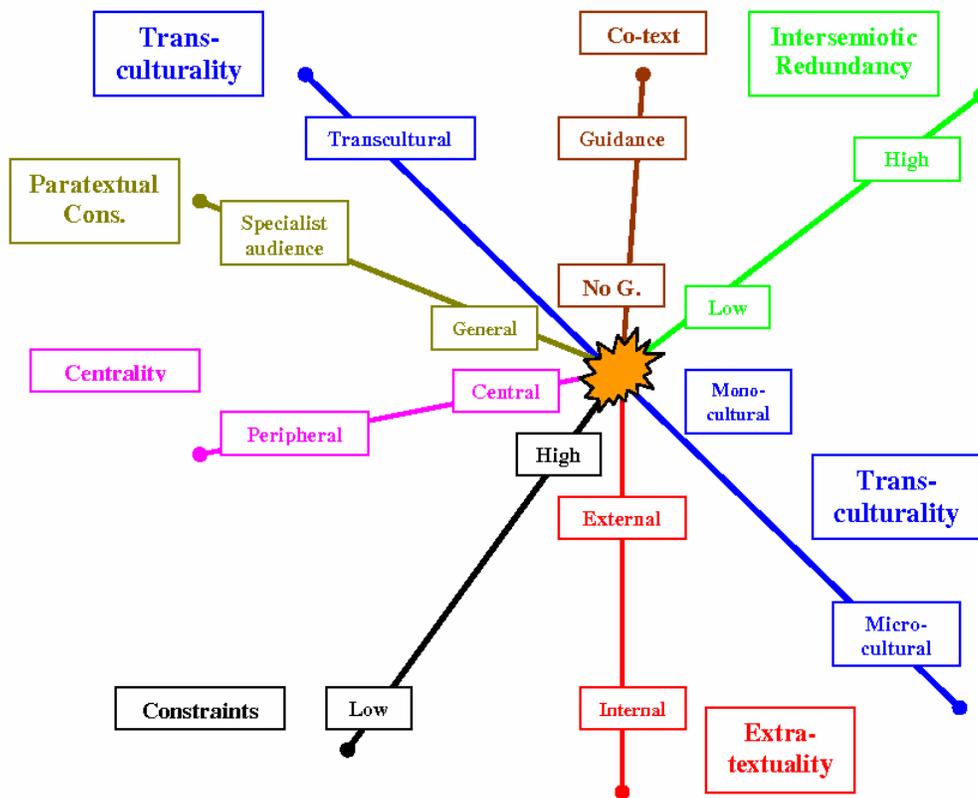


Fig. 4: The “untransferable” ECR

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## **8 Electronic resources**

Oxford English Dictionary Online: [www.oed.com](http://www.oed.com)

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# Website Localization and Translation

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- 2 Website localization
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## Abstract

Website localization poses new challenges to translators and translation studies. Its object, the Web, is a new multidimensional type of multi-media source material and the translation of web material constitutes a new type of multilingual service. Translation studies is well-advised to face up to this new challenge as it has a lot to offer. Localization of web sites will bring new aspects into translation studies such as dealing with hypertext and multimedia and will create a new demand for translation products and skills. The following paper attempts to clarify the key concepts of localization and to describe this new type of translation, as well as suggest and develop a strategy to apply from translation studies approaches to website localization.

## 1 Introduction

The following paper deals with the relation between web localization and translation; the former being a relatively new form of multilingual service which has not been dealt with adequately so far in translation studies. It is attempted to show that some aspects of translation studies are relevant for website localization, and vice versa website localization could provide some new insights to translation.

First of all we will look at some central concepts of website localization to avoid misunderstandings. Next, we will define and describe the process of website localization and its purpose by focusing on the overall aim of translating or localizing websites. This clarification is followed by a brief description of methods and strategies used in the process of localizing websites including the role and importance of business- related aspects of localization.

When we speak of the localization of websites, the terminology seems rather clear, at least in English: website is a very practical term in English. A website encompasses all web pages which are accessible under a common Web address (domain name) such as [www.petersandrini.net](http://www.petersandrini.net). A website consists of a number of documents, graphics, programs and so on, each of which is identified by a uniform resource identifier (URI). In German, however, there is a terminology problem, as there is no such term as website. When we talk about *Webseiten* (web pages) or *Homepage* in German, we mean all pages on the World Wide Web for a specified company or institution. Today, the new term *Webauftritt* has been created for the English term *website*. It is important to note that the object of localization is a whole website, i.e. a *Webauftritt* and not just one single webpage.

The second term used in the title *localization* is a term which is defined as adapting a product to a particular locale (LISA 2003, Esselink 2001, Yunker 2003). A *locale* refers to a

group of people who share a language, a writing system and other properties which may require a separate version of a product. This could be a region, a country, or just a language community.

Localization today is used in conjunction with the terms *internationalization*, which means the preparation of a product to make it suitable for efficient localization, and *globalization* signifies the global design of a product. Website localization is thus defined as the "process of modifying a website for a specific locale" (Yunker 2002: 17).

As translators we may ask ourselves whether translation is a part of localization, as pointed out in Esselink (2000) where the author defines localization as the overall task with translation being part of it, just like any other part of the process like project management, image adaptation or setting up a language gateway. This would imply that the localization professional is in command and the translator acts as a contributor of foreign-language texts. Seen from a translation studies perspective, however, the process of translation involves linguistic as well as a cultural transfer and the communicative intention or function of the target text is of overall importance. Translation, therefore, always involves some form of adaptation with respect to the text itself or other items relevant to the document such as graphics etc. Website localization places the text in the background and focuses on multimedia aspects. Nevertheless, the text still remains a key information assets within a web page. Translation - as a task - has a century-long history, whereas localization is a phenomenon of the last 20 years – maybe just a new name, a specific type of translation. In that case translation would then be the broader concept.

In the literature there are indications for both assumptions: on the one hand, there are specific training courses for localization professionals (LRC), associations for professional localizers to support the notion of a new strong localization profession, and on the other hand, translation training institutes offering courses on localization and translators working in the localization industry even though translation studies may be rather slow in measuring up to the challenges is new field of research. In any case it may be useful for both fields to learn from each other instead of trying to re-invent the wheel on the one side or be reduced to a mere text substitution process within a broader localization concept on the other hand.

## 2 Website localization

As already stated, a website can be viewed as a container with an address and a domain name on it. A website contains different types of digital assets which can be texts, pictures, multimedia files such as audio and video streaming, as well as application assets, i.e. files which can be accessed only by using proprietary software (e.g. Ms-word files) with the web merely used as a means of distribution which is not able to represent the content directly. In addition to these different types of assets, the website can also contain transactional assets, i.e. information about transactions (e.g. shopping baskets, sessions in e-commerce) as well as Community Assets, i.e. dynamic contents in forums and chat rooms, created by the web surfers themselves.

A website contains texts in different forms and formats, usually paired with multimedia contents. The most outstanding characteristic of web based texts is the cross-linking of texts or their hypertext components. Since hypertext and its features is extensively documented (e.g. Somers 2003), the following is only a very brief summary of its main features:

- No sequential entrance to a complete linear text is given; instead, short chunks of texts are offered to the reader who is free to decide in which sequence s/he will read them or which text chunks are chosen.

- Due to the specific measurements of the computer screen, the size of the webpage is limited; user friendliness of the web, therefore, depends on the length of a text - if it is longer than the screen, users have to scroll down.
- Furthermore, texts on the WWW are relatively short-lived. They are very fast on-line, but disappear just as fast again with each update.

The linguistic characteristics of Web texts have been the object of many investigations: e.g. David Crystal (2001), who coined the term *Netspeak* for the language of the Internet or smaller scope contributions, e.g. Vengadasamy and others (2004), who investigate the language of e-Commerce-sites.

For translation studies, research objectives need to address the assessment of these features in the light of translation processes and their interrelationship on the decisions of the translator.

A website is a form of online eContent, a term used within the framework of the European Community Research Programs eContent and eContent*plus*. eContent localization is the translation and cultural adaptation of digital information for local markets and we can distinguish three different types of eContent localization: software localization, website localization, and localization of other digital resources such as databases, documents, etc.

### 3 Functional Perspective

Some general introductions to translation studies have already tried to include the area of Web localization but with rather short and relatively modest results. Williams/Chesterman (2002) see the following research areas: "establish the current practice, investigate the effect of website constraints and user demands on translator's decisions both on the micro and macro level, evaluate the product, explore the feasibility of using controlled languages into website design to facilitate translation". As there are still some doubts about using controlled languages for websites in view of the heterogeneity of web documents and the strong expressive character of web advertising texts, authors stress the role of web text features, esp. the role of user demands and their consequences on the decisions of the translator.

User demands bring us back to the definition of website localization in which a website should be made linguistically and culturally appropriate to the target locale. On the one hand side there are user demands from the ultimate readers of the target text, i.e. the localized version of the website. The readers want to read the web page in their own language, and expect clear and understandable information and not be culturally offended by language, images, colors, and so on.

On the other side hand there are the client's goals which concentrate on what the company, institution or individual wants to achieve with the new website version. This purpose could be entirely different for the new foreign language website version than that for the source language website which will influence the translation or adaptation process as a whole.

With these problems in mind, we suggest a new definition for website localization referring to the overall purpose of the new language version as the

**process of modifying a website for a specific locale according to the goals outlined by the client.**

Building a multilingual website implies a considerable effort with a clear-cut objective in mind. If we look at companies and international organizations, the communicative intention of their websites is closely related to their international marketing strategy. The international marketing strategy does not only decide upon about sales policies in foreign countries but also on image campaigns and publicity. A website is a medium by which new foreign customers,

partners or people in general can be reached. International Marketing sets the overall goals of the new website for a foreign market or, more in general terms, for a foreign readership, i.e. what the new website is for and what should be achieved with the new language version in terms of corporate image or branding for example. Furthermore, an overall website publishing strategy has to be set up which has to answer the following questions: Does the website serve publicity reasons? Does the company want to sell products on the web (e-commerce) and if so, what kind of products? Is the website meant for customer interaction and customer support?

For an international company its international marketing goals can be related to the choice of languages used for the website. An empirical study conducted by a Swedish researcher Theo Schewe (2001: 205) establishes a close link between the marketing policy of a company and the choice of languages for its Web presence. The study presented a classification of “*web site language design strategies*” where Schewe distinguishes three general types of websites: monolingual, bilingual and multilingual websites. Within each type, the choice of languages reveals a certain type of marketing strategy that stretches from the domestic marketing strategy with a monolingual website in the *native* language to the global player strategy with a central website in English or the native language with independent local websites in other languages.

Such global strategies not only determine the choice of languages and the design strategies but also have a decisive influence on the translation strategy and can be summarized as follows:

#### **Website localization is a function of the international marketing strategy**

International strategic marketing strategies formulate an international company’s commitments in another country or the expectations from a foreign readership. All this is vital information for the localizer/translator and s/he should insist explicitly on getting this information from the client along with the translation assignment. Christiane Nord uses the term ‘translation brief’ (Nord 1997) referring to the basic information and instructions supplied in detail by the client. The general guideline for a web localization project should, thus, read as follows:

#### **Localize/translate in a way that the aims of the client can be successfully implemented with the new foreign-language website**

The most important factor for an overall translation strategy is to establish the general purpose of the new foreign-language website: What are the aims of the client? Why does he want to set up a foreign language website? What does he expect from it? The source text, the original website is just the point of departure for the localization project, which must be checked with the pre-defined aims of the client.

The focus on the communicative intention is nothing new for translators: Functional approaches in translation studies have been stressing this for a long time. Most criticism of the Skopos theory focused on the fact that it is not equally suited for all translational situations. For website localization, however, it is obviously of overall importance to take into account the function which „has to be negotiated between the client and the translator“ (Nord 1997: 35). The target text, i.e. the new foreign language website and its function are the primary focus. For the success of a localization project the pre-defined objectives of the company for the new website must be met. Any correspondence with the source text is of minor importance.

For the localization to be successful it is advisable to specify the client’s purpose of the new website explicitly and have it documented in a translation brief at the very beginning of the localization project. Included in the briefing should be the client and with Her/his organization, the management and/or marketing staff, not necessarily the IT experts who are responsible for the practical implementation of the website and can be included at a later

stage. Steps in this direction are already implemented in the DIN standard 2345 for translation assignments. The clearer the assignment, the easier is the quality control after completion of the localization process.

In the translation process, the communicative function is specified by the company or the organization represented by the website, less so by the web author who does the practical job of setting up the website and in most cases is an IT expert. The relation between the owner of a website and the web author could pose some problems on the monolingual level which of course can be avoided or at least weakened when the intended purpose of the website is made explicit. On the multilingual level, specifying the translation purpose is a necessity as the purpose determines the translation and localization strategy. Therefore, a close cooperation between different experts will be necessary as part of the translation process, i.e. the management defines global aims, international marketing experts refine these aims and state a global purpose for each market and the respective foreign language website, web authors set up a website, and the localizer adapts it taking into account the given purpose for local markets.

In a best practices scenario the client has made a strategy explicit according to the conditions above, but in practice many companies and international organizations lack a global, consciously chosen strategy for a multilingual web presence. In many cases a website has evolved gradually and slowly with the company or with an organization, and a de facto situation exists (cf. Rose Lockwood's (2000: 15 cf. below) with three main strategies for the management of multilingual and multicultural content. Let us look at these de facto strategies employed when organizing a global website according to the three different approaches outlined by Lockwood (2000: 15):

1. The monarchist approach with central control over the content where content is translated but seldom adapted. The result is a website which is not sensitive to local markets.
2. The anarchist approach with multiple local sites without coordination, each using a different design. In this case there will be high costs and no corporate strategy.
3. The federalist or subsidiary approach which is a compromise between the first two strategies as it integrates global, regional and local content (GRL). Global content is produced centrally, translated and used internationally; regional content is also translated and used in a regional context whereas local content will be produced locally in the local language without the need for translation.

The monarchist approach in translation is prominent: The whole website is translated. The methodology implemented is unclear, generally referred to the translation of web pages, an approach in line with traditional translation strategies - with the only exception that hypertext pages (HTML) must be translated. This however, involves a few technical questions regarding the characteristics of HTML-documents with no special change in translation strategy. This approach is typical for bilingual territories and centralized international organizations.

The anarchist approach seldom involves any translation as the whole content is produced independently and locally.

It is only in the federalist or subsidiary approach that localization becomes relevant as global and regional content must be adapted/localized/translated for use in different countries. Whatever the approach of the company may be, the most important aspect of translation as a service provider is to integrate translation as much as possible into the information and publishing cycles of the company or organization. One way of achieving this is by clearly defining the purpose of the translation assignment. Another way could be cooperating with the client and discussing general strategies.

## 4 Business aspects

The economic aspect of translating websites is the most important for the client. It is here that technology comes in and translation technology has indeed a lot to offer. It must be stressed, though, that translation technology profits from long term planning and long term investment. A terminology data base, a translation memory are tools that must be serviced over a long period of time to become really useful resources. The same holds true for a content management system with standardized paragraphs of text and the newer global content management systems with multilingual support incorporating terminology and translation memories.

On the one hand we can see a convergence of content management, web publishing, print publishing and database publishing, where documents will be split up into knowledge items or small chunks of text which can be reused for different purposes, e.g. in manuals, on line help texts, customer support files, websites, etc. On the other hand there is a convergence of translation and multilingual web publishing in the sense that translation will be integrated into multilingual web publishing. Consequently, translators won't need to interfere with HTML or XML or whichever mark-up language, for the software will do the job. As content management, terminology databases and translation memory systems integrate into global content management systems (GCMS or GMS); translators will deal with just one software environment.

Localization and translation cost money. This is evident, but it is much less evident that it costs more money. If done independently of all other authoring and publishing activities, i.e. it costs money if it is integrated into information and publishing cycles, if multilingual support in general is planned for from the beginning on a long term basis, and if multilingual tools are set up within the company or organization.

Translation as a cost factor has been discussed within the transaction cost model by Pym (1995 and later) and others: it states that the mutual benefits for the communication partners must be higher than the costs for translation, otherwise there would be no more translation assignment. Translators should be well advised not to leave such economic reasoning to the client, because not always is the client well informed about costs and benefits of translation or localization projects. By drawing the clients' attention to this aspect and by giving them good advice, the translator/localizer may establish a good basis for a medium to long-term relationship with his client - opening the client's eyes to his role in successful multilingual communication.

Applying simple *Return on Investment* (ROI) calculations when planning a web localization could be of great help. The ROI describes the relation between the investment put into multilingualism and the resulting benefits for the company or organization such as the opening of a new market, savings in customer support or an increase in e-commerce revenues, and so on. The client needs to get the corresponding economic Fig.s from her/his own company. With the help of a short list of questions the client could be made aware of possible costs and benefits:

- Does the new market need your products/services?
- Can they afford your products?
- How can consumers pay?
- Are market growth rate and revenue potential Fig.s available? (GDP, GDP-growth rates)
- Internet usage – digital divide
- Product delivery?
- Customer and product support? (staff resources)

- Cost of website localization?
- Cost of website maintenance?
- Compatibility of computer systems?
- Any legal or regulatory issues?

These questions should always be discussed in a meeting or briefing at the very beginning of a localization project. Although most of these questions are of a purely economic nature, and although the client, the company or the organization, has to find the answers with the help of the respective staff, sales and marketing people, as well as financial advisers, it is the responsibility of a good service provider to underline their importance as a sound basis for the success of the project. In the end the success of a foreign language website - and consequently of the whole localization effort - will be measured by these standards. The localizer has to present himself to the client as a provider of solutions who helps the company achieve its aims and not just as an outsider who costs a lot of money and causes a lot of problems.

In order to achieve this, traditional training models and curricula must be adapted to cater for a new image of the localization expert. Defining training requirements in the light of recognized professional practice accounts would also require the integration of the following skills:

- Basic knowledge of international marketing
- Business models of localization and multilingual information management
- Strong emphasis on translation technology (terminology management, translation memory, and content management) as website localization could be a technological challenge for translators.

### **Summary**

Localization has evolved in the past 15 years into an important industry with a few global players, whereas translation still remains in many aspects a fragmented field of free-lancers' website localization poses new challenges to translators and translation studies. In particular, the function of the localized website is closely related to economic and business strategies, hence the overall importance and impact of international marketing on foreign language website creation and consequently on website localization. Translators and localizers have to address these requirements in their work. This makes explicit translation or localization assignments indispensable and includes business models for localization to assure successful translation. The big advantage that translation has is a wide area of academic research, something that localization lacks - at least at this point in time. Therefore, there has to be a convergence between translation studies and localization, or in other words, translation studies must address localization issues, or else we will end up having an academic field of localization studies, independent from translation, which will compete with translation for ever diminishing funding. Website localization, on the other hand, should account for the progress made in translation research and put it into use. The interrelationship of localization and translation, therefore, opens up a new research paradigm.

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## Cultural Leeways and Discourses in Narrative Texts

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- 2 The concept of ‘Cultural Leeway’
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### Abstract

The following study is a summary project statement of my dissertation at Ege University, Turkey. It deals with the translation of discourse in narrative texts and claims that when translating between cultures with different discursive preferences the translator has a certain ‘leeway’ when reproducing the cultural embedding of the source text for target readers. The purpose of this article is to discuss this phenomenon and to illustrate the different communicative preferences between German and Turkish through the examples from the German translation of Yaşar Kemal’s *Yer Demir Gök Bakır* (1963) and the Turkish translation of Günter Grass’ *Die Blechtrommel* (1959). As such, it aims to show how German and Turkish differ in the representation of social and emotional relations – a cultural difference that manifests itself strongly in the above novels and their translations. After a brief discussion of the concepts of narrative texts, culture & discourse and translation, the concept of ‘leeway’ is introduced as it manifests itself in the categories ‘personalization’ (expressed by direct address, kinship lexicalizations), ‘emotionalization’ (expressed by the use of swearwords and religious and/or blasphemous expressions), ‘routine formulae’ (figuring deixis and tense), ‘addressee orientation’ (e.g. expressed by direct address) as well as ‘non-verbal’ gestures and their descriptions.

### 1 Narrative texts, culture & discourse and translation

According to de Beaugrande/ Dressler (1981:190), *narrative texts* are texts which organize actions and events in a definite sequential order. Not only the topic itself, but also the way it is communicated is significant, the perspectives expressed, the intervention in the time sequence or the linguistic register of articulation. The term ‘narrative texts’ thus embodies the techniques and forms of describing events. Narrative texts are often called fictional in order to emphasize its difference from the *real world*. The relationship between the displayed reality and the environment of the reader is an important prerequisite for the comprehension of the *fictive* reality.

In the communication-orientated narrative research, the relationship between the sender and the addressee and the conditions of reception are focused by Czennia (2004:995) who emphasizes that the speech of the narrator and the speech of the characters form two dimensions in a novel: only from this duality the multi-level situation of the narrative develops into the narrating procedure typical of this genre. Both the speech of the narrator and the speech of the characters depend on the content of information, on the author’s cultural ‘system’ and on how this differs with respect to other cultures.

Narrative texts have been positioned as expressive texts within the framework of Reiß' translation-oriented text typology (1971:38), the expressiveness articulating itself particularly by the dominance of linguistic form and expression. Texts are embedded in certain cultures – this is particularly true of narrative texts – , i. e. they do not only reflect and require a certain technical or material knowledge, but also a knowledge acquired through experience and participation in the source text language and social environment.<sup>1</sup> As sender-oriented texts, the individual aesthetic dimension is foregrounded, meaning that we assume that the author's intention is to reveal his or her own ideas, values and convictions by – consciously or unconsciously - producing an aesthetic effect. The author's intention to create this aesthetic effect in the reader is assumed to change the perceptions, interpretations and evaluations of the reader although generally no particular target reader type is addressed. Obviously, texts have different effects on individual readers. It must be assumed, however, that some effects are shared by a group of readers (cf. Mudersbach 2002). The interest of this study lies in the question whether 'culture', which is here taken to manifest itself in discourse preferences as outlined e.g. by Clyne (1994), House (1996 and 1999) Gerzymisch-Arbogast (1993 and 1997) produces different 'effects' in different (cultural) groups and how this understanding influences the translation process. Our hypothesis is that different underlying cultural values in narrative texts require translation procedures that are aware of and account for the potentially different effects on different cultural readers. This will be exemplified by examples of original and translated works with the objective to make the discrepancies in the perception and description of social relations transparent.

It is assumed that translations of narrative texts generally reflect the target readers' interest in the foreign culture underlying the text. Because the narrative text offers foreign experience of a foreign author with a foreign representation: the target language reader is introduced to a product of a foreign culture by the role of the translator who in this respect acts as a mediator. For the translator in his/her interest of establishing communication between members of different cultures, the basic requirement is not only to communicate by language, but also to convey source-cultural values and characteristics to a target-cultural readership. Such information in narrative text is imparted in many ways. While the author is writing texts, s/he produces his/her work under the influence of the discourse norms that control his/her perception. The underlying cultural systems underlying such texts can be made transparent by analysis as described by Bachmann-Medick (1996:7-9), Floros (2003), Ndeffo (2004) and Kim (2005a and b). The translator needs to be aware of these cultural implications and must decide whether s/he wants to either make the reader understand the source-text culture or render a text that is oriented towards the target culture. This conflict in the translator has been known and problematized by numerous translation scholars from bible translation, functional approaches to modern multidimensional translation theories.<sup>2</sup> The earliest debates date back to antiquity with Cicero speaking against word for word translation and advocating 'free' translation, thus becoming the first to describe two translation types (see Kloepfer 1967:23). Schleiermacher in his famous *Über die verschiedenen Methoden des Übersetzens* (1813) categorized these types as: "either the translator leaves the author alone if possible, and moves the reader towards the author, or s/he leaves the reader alone and moves the author to the reader" (cf Schleiermacher 1967:47). For the translator, as inferred from the quotation above, there is the possibility of either the source language orientation or the target language orientation. This distinction is differently designated in translation theory, philosophy, literature and literary studies (for an overview cf. House 2004:108). Within this framework, House differentiates the two dimensions of *overt* and *covert* translation. In the

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<sup>1</sup> For the interaction of knowledge and text cf. Dam et al (2005).

<sup>2</sup> Cf. Gerzymisch-Arbogast 2007.

case of the *overt* translation, House claims that the translated text serves the function of the original text in its cultural framework and discourse. The function of the source text, i.e. the use of the text in a certain context, can remain intact in the case of overt translation. Only a kind of *transferred function* is identifiable since an overt translation embeds the text into a new social event, gives it a new framework and puts it into a new discourse (cf House 2002:106). In contrast, covert translation pursues the goal of re-creating the function in its own discourse in the translated text in order to manufacture equivalence as far as the cultural context is concerned. Covert translations are pragmatically not marked as the target text language of a source text so that they function as a second original. Within this framework, House emphasizes the necessity of a cultural filter in the case of the covert translation (House 2002,107):

In order to successfully use a cultural filter, the translator must consider cultural acceptance and conditions of both the source-linguistic and the target-linguistic community and translate the target text accordingly. In the case of a covert translation, it is expected that the translator will compensate the culture-specific phenomena; that is, the translator has a certain amount of ‘leeway’ when reproducing source-cultural characteristics into target-cultural characteristics.

Culture has long been considered an integral part of translation (Kade 1968, Reiss 1971 and Koller 1979, Hönl/Kußmaul 1982). In the late eighties and beginning of the nineties, its eminent role in translation has been stressed and discussed from many different perspectives by Holz-Mänttari (1984), Snell-Hornby (1986), Vermeer (1986), Gerzymisch-Arbogast (1997, 1998, 1999 and 2005), Witte (2000), Thome et al (eds) (2002), Floros (2003), Kim (2005a and b). Today we can safely say that the machine translation paradigm of ‘code switching’ and ‘substitution’ has given way to the idea of translation as cultural mediation. This raises many problems ranging from philosophical questions as to the function of culture via its manifestation in texts and its contrastive description.

Within the paradigm of literary translation, this conflict has been problematized by Levý (1969), who represents a source-text orientated approach. The Poly-System-Theory from Even-Zohar (1979) places the literary text in a broader cultural context and has been accepted and perpetuated by Toury (1980) and the representatives of *The Manipulation of Literature* (e.g. Hermans 1985), who stand for a context-sensitive approach in translation studies. The theory of the *Göttinger Forschungsgruppe* around Armin Paul Frank (1988) follows Hermans’ and Toury’s descriptive and target-text orientated approach and have thus contributed to the rejection of ‘prescriptive’ theory building with respect to literary translation in general. The functional approach with its target text orientation (Snell-Hornby 1986, Vermeer 1986) cannot explain or analyse the underlying cultural dimensions of a source text and can thus not solve the problems of transfer to a target culture. Juliane House tackles this problem by understanding translation as the rendering of a text in the source language by a semantically, pragmatically and textually equivalent text in the target language (cf House 2002:103) and emphasizing that a translation is equivalent to the original only when the translation has a function that is equivalent to the function of original text (ibid.). She understands function as *the function of the text*, as the use of the text in a certain situational context. Based on Halliday (1994) and his systemic functional theory, House develops – on the basis of English and German - a model by which texts, particularly narrative texts, can be analysed and compared in their contextual embedding which reveals differences in the discourse preferences of diverse native speakers (e.g. House 1997, 1998 and 1999). It is within this context that we will establish our notion of cultural leeway.

## 2 The concept of ‘Cultural Leeway’

Cultural leeway is the ‘variation field’ for the translator when translating cultural phenomena from source to target texts in order to achieve covert translation equivalence on a lexical, semantic and pragmatic level.

We will illustrate the concept of cultural leeway by the following examples from the German novel *Die Blechtrommel* published by Günter Grass, and its translation and the Turkish novel *Yer Demir Gök Bakır* by Yaşar Kemal. *Die Blechtrommel* was published under the name *Teneke Trampet* (Cem Yayınevi, 1983) by Kâmuran Şipal for the Turkish readers. The novel, *Yer Demir Gök Bakır* is translated for the German readers by Cornelius Bischoff under the name *Eisenerde, Kupferhimmel* (Unionsverlag, 1986). Both narrative texts are published in several editions in the source language and in the target language and have thus reached a large number of readers. The texts are compared using as *tertium comparationis* the categories ‘personalization’, ‘emotionalization’, ‘routine formulae’, ‘addressee orientation’, as well as ‘non-verbal’ gestures and their descriptions. For reasons of space, these categories, which are similar to Juliane House’s discourse preferences established for German-English comparisons (1996, 1999) are not explicated here but are discussed together with their German-Turkish examples.

## 3 Examples

### 3.1 Addressee Orientation

In *Yer Demir Gök Bakır*, the narrator tends to address the reader directly, whereas in its German translation the agent is deleted as follows:

İşte bu dünyanın aklığına Çukurova güneşi gibi bir de belalı güneş vurmuş, karların üstüne öylesine bir de ipilti çökmüş, göz açıp da bakamazsın. (Kemal 1980 :5)  
Und auf diese weiße Welt scheint zu allem Überfluß die Sonne so hell, wie sie nur in der Çukurova-Ebene scheint, die Schneedecke glitzert so grell, daß man die Augen nicht offen halten kann. (Kemal 1992:5)

“Göz açıp bakamazsın” is translated word for word in the Turkish version as *you cannot keep your eyes open*. The Turkish narrator takes the perspective of addressing the reader here, whereas in the German translation the impersonal form, “man” is preferred. The German translator decides on the impersonal form frequently as part of his ‘cultural leeway’. On the contrary, an excerpt from the *Blechtrommel*:

Man kann eine Geschichte in der Mitte beginnen und vorwärts wie rückwärts kühn ausschreitend Verwirrung anstiften. Man kann sich modern geben, alle Zeiten, Entfernungen wegstreichen und hinterher verkünden oder verkünden lassen, man habe endlich und in letzter Stunde das Raum-Zeit-Problem gelöst. Man kann auch ganz zu Anfang behaupten, es sei heutzutage unmöglich, einen Roman zu schreiben, dann aber, sozusagen hinter dem eigenen Rücken, einen kräftigen Knüller hinlegen, um schließlich als letztmöglichster Romanschreiber dazustehn. (Grass 1993:12)  
Bir orta noktadan yola koyularak hikâye etmeye başlayabilirsiniz bir serüveni; sonra geriye olduğu gibi, ileriye doğru atak adımlarla yürüyüp işi kariştirabilirsiniz. Ama çağdaş bir tutumla da davranıp zaman ve uzaklıkların tümü üzerinden bir sünger geçer, hele şükür son anda zaman ve mekân sorununu çözdüğünüzü ilân edebilir ya da ettirebilirsiniz. Ama daha anlatıya başlarken bugün artık bir roman yazılamayacağımı ileri sürebilir, ancak sonradan, kendiniz de farketmeksizin ortaya zorlu bir eser koyup varlığı mümkün en son romancı edasıyla boy gösterebilirsiniz. (Grass 2000:10)

The word for word translation of “başlayabilirsiniz” is *you can begin* and “karıştırabilirsiniz” is translated as *you can mix it up* and “zaman ve uzaklıkların tümü üzerinden bir sünger geçer, hele şükür son anda zaman ve mekân sorununu çözdüğünüzü ilân edebilir ya da ettirebilirsiniz” is translated as *time and distance remains far beyond, thank god you can announce or make it announced that you have solved the problem of time and space* and “boy gösterebilirsiniz” is translated word for word as *you can stand*. The fact that the impersonal form is present also in the Turkish version, but that the translator does not prefer it, is here interpreted as an indication of the tendency that the impersonal form is not common in narrative texts and ‘disturbs’ the flow of the speech.

### 3.2 Emotionalization

When comparing *Yer Demir Gök Bakır* and its translation we can note that the translator tends to reduce the effect of the blasphemies and rude expressions. Hence, as it is demonstrated in the above quotation, the adjective “belalı” is translated in the German version through conveying its meaning: it is expressed as *over-shining sun*, whereas in Turkish it is *darned sun*. In the German version of the narrative text, blasphemies and rude expressions are softened or not translated at all. While in Turkish, those expressions denote a certain closeness and intimacy between the narrator and the reader, the German text appears to be neutral in attitude. Not only the blasphemies, but also most of the emotional expressions in German appear more neutral and objective. For example, in order to underline the emotion, the translator adds punctuation marks missing in the source text:

Am Vormittag hätte man sehen können, wie es die Großmutter verstand, das schlaffe Kraut zu ordentlichen Haufen zu rechnen, mittags aß sie ein mit Sirup versüßtes Schmalzbrot, hackte dann letztmals den Acker nach, saß endlich in ihren Röcken zwischen zwei fast vollen Körben. (Grass 1993:12-13)

Öğleden sonra görecektiniz anneannemi! Doğrusu o ne becerikliliği! Elinde tırmık, kurumuş patates yapraklarını güzelce bir araya toplayıp öbekler yapmış, öğleyin üzerine domuz yağı sürdüğü marmelatlı ekmeğini yemiş, derken tarlayı son bir kez çapalamı, nihayet eteklikleri altına, nerdeyse ağzına kadar dolu patates dolu iki sepet arasına çökmüştü. (Grass 2000: 10-11)

Thus, the translation of “Öğleden sonra görecektiniz anneannemi! Doğrusu o ne becerikliliği!” is *You should have seen my grandmother in the afternoon! What a competence it was!*

The following excerpt also demonstrates how statements in the Turkish translation are emotionally stressed:

Ob aber jener Läufer ein Koljaiczek gewesen, wußte meine Großmutter nicht, entschuldigte ihre Unwissenheit mit dem Feuer vor ihren Stiefelsohlen; das gäbe ihr genug zu tun, das bränne nur mäßig, deshalb könne sie sich auch nicht um andere Leute kümmern, die hier vorbeiliefen oder im Qualm stünden, überhaupt kümmere sie sich nie um Leute, die sie nicht kenne, sie wisse nur, welche es in Bissau, Ramkau, Viereck und in der Ziegelei gäbe – die reichten ihr gerade. (Grass 1993: 19)

Ama koşarak yanından geçip giden adam Koljaiczek miydi, bunu bilmiyordu anneannem; bilmemesini de çizmelerinin pençeleri önündeki ateşle bağışlatmaya çalıştı, ateşin yanması zaten yeterince uğraştırıyordu kendisini; baksana, şöyle doğru dürüst yanmayı bilmiyordu meret! Bir de yanbaşından koşarak geçip giden ya da duman içinde dikilen adamlarla mı ilgilenecekti! Zaten tanımadığı kimseleri hiç merak etmezdi anneannem; bütün tanıdıkları ise Bissau’da, Ramkau’da, Viereck’te ve kiremithanede olanlardı, bu kadarı da kendisine pekâla yetiyordu.(Grass 2000:17)

The translation of “Baksana, şöyle doğru dürüst yanmayı bilmiyordu meret! Bir de yanbaşından koşarak geçip giden ya da duman içinde dikilen adamlarla mı ilgilenecekti!” can

be translated as: *Look how this damned thing doesn't even burn properly! Do you think she will care about the guys running around or the ones standing erect within the smoke!*

Furthermore, in Turkish, emotions are supported with gestures more generously than in German. For instance, in the first chapter of the novel *Yer Demir Gök Bakır*, the hands of Hasan and Ummuhan touch one another for six times – this is stressed by the narrator. In *Blechtrommel*, gestures and facial expressions appear to be subordinate or auxiliary to speech.

### 3.3 Routine Formulae

A further characteristic of the Turkish discourse in the analyzed texts is the frequent use of idiomatic routine formulae with a religious connotation. In the German narrative texts that were analyzed, those expressions are used more directly. In the first chapter of *Yer Demir Gök Bakır*, examples of idioms are: “Yoldaş olma namussuza, arsız. Akıbet başına bela getirir.” (Don't ever be a companion to the dishonourable and shameless, or else you'll get into trouble in the end); “Yalnız git, yoldaş olma yüzüze” (Go by yourself and don't be a companion to the impudent); “Erkek olmayanın yalanı çoktur” (Those who are not man do lie a lot); “Orospuda iman olmaz, din olmaz.” (Whores do not have neither faith nor religion).

In particular, religious expressions like “kurban olayım” (do sacrifice me), “Allahın belası kuş” (God damn bird), “Vallahi billahi söylemem” (I swear to God I will not say it to anybody) are used more frequently in Turkish than in German narrative texts.

The following example shows that the translator does not hesitate to add idioms in accordance with the different communicative preferences, although the source text does not include any:

Zugegeben: ich bin Insasse einer Heil- und Pflegeanstalt, mein Pfleger beobachtet mich, läßt mich kaum aus dem Auge; denn in der Tür ist ein Guckloch, und meines Pflegers Auge ist von jenem Braun, welches mich, den Blauäugigen, nicht durchschauen kann. (Grass 1993:9)  
Ne yalan söyleyeyim, bir akıl ve ruh hastalıkları kliniğinin sakinlerindim. Bakıcım göz altında tutuyor beni, gözlerini üzerimden pek ayırmıyor, çünkü kapıda bir gözetleme penceresi var ve bakıcımın gözleri o malum kahverengi renkte, ben mavi gözlünün bir türlü içini göremiyordum. (Grass 2000:7)

The word “zugegeben” is translated into Turkish with a routine formula, i.e. it is translated word for word as *why should I lie*. This routine formula is employed in order to attract the attention of the addressee and express sympathy. At the same time, this routine formula arouses a feeling of compassion towards the protagonist, which does not exist in the German version.

Moreover, also the morphologic structure causes a discrepancy between German and Turkish. In Turkish, tense and person can be in the verb as suffix. It is left to the speaker whether subject and time are additionally expressed or not. However, as with the example “seni seviyorum” the agent of the action is often not overtly told by the pronoun, “I”. Thus, the language achieves a more dynamic style through the possibility of expressing more with few words: “vazgeçtim” becomes *I changed my mind* or “Ummuhanı göremedi” becomes *he could not see Ummuhan*. In this respect, thanks to the possibility to convey the subject within the verb, the narrator does not have to repeat the subject and cause monotony in the flow of the language. The ‘variation field’, allowed in the Turkish text, is missing in German. Therefore, if the translator additionally utters the pronoun, the meaning is over-stressed and the subject becomes the central issue of the sentence and causes a distance between the participants of the conversation. The following excerpt from *Blechtrommel* shows that the translator avoids the additional reference to the subject in order not to over-emphasize the agent:

Nicht allzu lange hob und wog ich den zäh flexiblen Packen. Zehn Blatt zählte ich ab, der Rest wurde im Nachttischchen versorgt, den Füllfederhalter fand ich in der Schublade neben dem Fotoalbum: Er ist voll an seiner Tinte soll es nicht fehlen, wie fange ich an? (Grass 1993:11)  
Elimle terazileyip tartarak fazla oyalanmadım katı, esnek pakete; içinden on yaprak sayıp aldım, gerisini komodinın gözüne tıktım. Dolmakalem çekmece, albümün yanbaşıda duruyor; içi dolu, yani mürekkep de tamam. Peki, ama nasıl başlamalı? (Grass 2000:9)

In the Turkish translation, the subject does not appear as an independent word in contrast to the source text. Only by adding the suffix the agent reveals himself, although there is the possibility to verbalize the subject in the Turkish text as it is in German. The translator decides to use this cultural leeway in the above mentioned form.

Furthermore, it can be stated that there are more possibilities in Turkish to express kinship than in German. Hence, the grandmother in the Turkish translation is not called “büyükanne”, but “anneanne”, which carries the meaning of *the mother’s mother*. The translator has more cultural leeway due to the Turkish language system and resources. The following table illustrates this:

<b>Turkish</b>	<b>German</b>
Dayı	brother of the mother - <u>uncle</u>
Amca	brother of the father - <u>uncle</u>
Enişte	Husband of the sister or the aunt (sister of the mother) - <u>uncle</u>
Yenge	wife of the uncle (brother of the father) - <u>aunt</u>
Teyze	sister of the mother - <u>aunt</u>
Hala	sister of the father - <u>aunt</u>
Anneanne	<u>grandmother</u> - mother’s mother
Babaanne	<u>grandmother</u> - father’s mother
Abla	elder <u>sister</u>
Ağabey	elder <u>brother</u>

This differentiation shows that Turkish language offers a greater variety for kinship expressions. This goes along with the stronger emphasis on verbalizing social relationships in narrative texts: social relations with family members, with neighbours, older persons, etc. This seems to be in contrast to German where - on both levels, the systems and the text level – the individual is the centre of attention.

## 4 Summary

The comparison of the above texts has shown the following differences in communicative preferences: particularly social and interpersonal relations show much less diversity in the English-German language pair than in the German-Turkish texts under investigation. Also, addressee orientation in Turkish is more strongly stressed in contrast to the German text. The Turkish narrator tends to speak directly to the reader while in the German translation, the agent is more often absent. The Turkish narrator takes the perspective of the reader whereas impersonal forms are preferred in the translation of the German texts. Furthermore, it can be generally determined that in German one swears less than in Turkish. Most blasphemies (but also other emotional expressions) are rather softened or omitted in German making the text more neutral, whereas the use of the rude expressions in Turkish indicate a certain closeness and even intimacy between the narrator and the reader. Finally, it appears that the description of gestures and facial expressions seems to be auxiliary in German while they are central in the Turkish texts. Above all, social relationships, whether expressed verbally or by body

language seem to be a more important and frequent element in Turkish texts when compared to German. Seen from a multidimensional perspective this may mean that while these differences may be inconspicuous in written texts, they may well be compensated through the visual channel in films, videos and DVDs. This would open up a totally new field of research with the challenges outlined in this volume (cf. Gerzymisch-Arbogast 2007).

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# An Approach to Corpus-Based Interpreting Studies: Developing EPIC (European Parliament Interpreting Corpus)

## Contents

- 1 Introduction
- 2 Methodological issues in interpreting research
- 3 The EPIC multimedia archive
- 4 The EPIC corpus
- 5 Research and pedagogical applications
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## Abstract

Empirical research on simultaneous interpreting is hampered by the problem of collecting sufficient material (recordings of source speeches and interpreted target speeches) for the testing of hypotheses and validation of existing theories. In other words, corpora have long been awaited in the field of Interpreting Studies. In January 2004 a research group on corpus-based interpreting studies was set up in the Department of Interdisciplinary Studies in Translation, Languages and Cultures (SITLeC) of the University of Bologna at Forlì, in order to create an electronic parallel corpus with source and target speeches in Italian, English and Spanish. The main research interest of the group is the study of interpreters' strategies across different language directions (directionality) and language-pair related difficulties. In this paper, the authors illustrate the various stages of development of the EPIC corpus, highlighting both research and pedagogical applications of this "multidimensional" tool comprising video, audio and written materials, which can be retrieved, selected and analyzed by using corpus linguistics techniques.<sup>2</sup>

## 1 Introduction

In January 2004 a research group on corpus-based interpreting studies (the Directionality Research Group<sup>3</sup>) was set up in the Department of Interdisciplinary Studies in Translation, Languages and Cultures of the University of Bologna at Forlì, in order to study conference interpreters' strategies across different language directions (directionality) and language-pair

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<sup>1</sup> Although the present article is the result of a joint effort, Claudio Bendazzoli can be identified as the author of (3), (4), and (5.1), whereas Annalisa Sandrelli is the author of (1), (2), and (5.2). The Conclusions (6) were jointly drafted.

<sup>2</sup> For an update on investigations on the basis of the EIPC corpus cf. Annalisa Sandrelli/Claudio Bendazzoli, The EPIC corpus - first results. Proceedings of the third MuTra Conference 'LSP Translation Scenarios'. Vienna 30<sup>th</sup> April - 4<sup>th</sup> May 2007. Edited by Sandra Nauert. Saarbrücken: [www.euroconferences.info/proceedings](http://www.euroconferences.info/proceedings).

<sup>3</sup> The other members of the Directionality Research Group are Mariachiara Russo, Cristina Monti, Marco Baroni, Elio Ballardini, Silvia Bernardini, Gabriele Mack and Peter Mead. The EPIC web designers are Lorenzo Piccioni and Eros Zanchetta.

related aspects. The chosen method was the application of corpus analysis techniques to interpreting data. An electronic parallel corpus of source and target speeches in Italian, English and Spanish, named EPIC (European Parliament Interpreting Corpus), is currently being compiled and analyzed (Monti et al. forthcoming; Sandrelli and Bendazzoli 2005 forthcoming).

Corpus-based research is already a well-established branch of Translation Studies, whereas corpus-based interpreting studies as a discipline is still in its infancy. Indeed, several so-called “corpus-based” interpreting studies of the last few years contain analyses of very small sets of data, e.g. one individual interpreter’s performance in a single conference (or even part of a conference). Moreover, these studies are based on manual analysis of the data, in that transcripts are not machine-readable: this means that it is not possible to fully exploit the potential offered by the software applications developed by corpus linguists and already widely-used in corpus-based translation studies.

In an influential article published in 1998, Shlesinger (1998a) called for the development of parallel and comparable corpora for interpreting studies. In her opinion, comparable corpora of original and interpreted speeches in the same language could be queried to investigate the characteristics of interpreted language. On the other hand, parallel corpora of source and target speeches could be used to test and validate existing theories on interpreting, particularly as regards interpreters’ strategies and interpreting norms. However, researchers interested in creating interpreting corpora are faced with several methodological and practical challenges (Cencini 2002), as is briefly discussed in (2). Section 3 outlines how the EPIC multimedia archive was created, whereas section 4 describes the characteristics of the EPIC corpus. The potential research applications of the EPIC corpus are presented in (5.1), whereas (5.2) explores the teaching applications of the EPIC multimedia archive. Finally, section 6 presents our conclusions and future prospects for the project.

## **2 Methodological issues in interpreting research**

The available literature on interpreting can be broadly categorized either as observational studies or controlled experiments (Gile 1994, 2000; Shlesinger 1998b). Experimental studies are usually carried out to study specific, isolated aspects of interpreting. Clearly, in order for a study to be methodologically sound, experimental conditions and the choice of subjects, materials and tasks are extremely important. It is equally essential that the research goals be clearly defined and delimited from the start.

On the other hand, observational studies offer the chance of seeing all the factors at play in a real working situation, but they are hampered by the problem of collecting sufficient high-quality data, i.e. recordings of conference speeches and interpreted target speeches. Researchers are often refused permission to record conferences by speakers and/or organizers (for confidentiality reasons) and by interpreters themselves, who are not always keen to collaborate in what they perceive as attempts to evaluate the quality of their work (Cencini 2002; Gile 1997; Kalina 1994). However, in the present paper our focus is precisely on collecting and analyzing genuine empirical data from working contexts.

Difficult access to recordings is accompanied by a number of methodological obstacles. The most important ones are the preparation of a rigorous research design and the suitability of the material for analysis, namely its homogeneity.

As regards homogeneity, Shlesinger points out that the complexity of the interpreting process, with its many variables, must be taken into account in order to design a suitable research question and obtain valid results (Shlesinger 1998b:3-4):

To establish ecological validity and to arrive at meaningful findings, one must control as many of the independent variables as possible, so as to ensure that measurements in terms of the chosen dependent variable(s) are indeed reliable indicators of whatever one wishes to measure.

In a conference interpreting situation the independent variables are manifold. Shlesinger (1998b) presents a review of the available research carried out on the variables related to the modality of interpreting, to speeches, speakers, settings and interpreters. Along similar lines, Alexieva (1997) presents a classification of interpreted events on the basis of broad parameters, including mode of delivery and production, participants, topic, text type and text-building strategies, spatial and temporal constraints and the goal of the event. The present paper does not discuss all of these parameters in detail. It presents merely an overview of the many aspects which must be borne in mind when collecting and analyzing interpreting data.

Some of the independent variables regard the participants in a conference interpreting situation. Gile (1995) talks about a client (the person or organization that requests the professional services of an interpreter), a speaker (or sender), an interpreter, source language listeners and target language listeners (or receivers). Russo (1999) expands the classification suggested by Pöchhacker, who splits the Client role into two different figures, the initiator (the institution or body that organizes the conference) and the client (the party entrusted with the actual organization work), by adding another role, the sponsor, who is seldom physically present in the conference but provides the necessary financial means for the event. All of these figures determine the characteristics of the conference and therefore have an impact on the interpreting service.

The degree of variability is very high: just to give an example, speakers may express their own ideas or be there on behalf of someone else. They may be experienced speakers or first-timers; they may be expressing themselves in their own language or in a foreign language. Their accent may be marked (foreign or regional) or standard. Their style may be formal or casual. They may deliver an impromptu speech or may read a written script, at a fast or slow speed, and so on.

As regards interpreters, their levels of expertise may vary according to training and experience. The quality of the interpreting service may be influenced by their health conditions, preparation (which in turn is influenced by the time and materials available to them before the event), working conditions (the quality of the equipment, noise levels, room layout and visibility conditions from the booths, etc.), and many more factors.

Audience composition is also important, that is, whether the interpreter is translating for a small group of people who are all native speakers of the target language, or whether the service is being provided for a large audience for whom the target language is a foreign language.

Other important variables when analyzing an interpreted event are related to the speech, including the type of event, which in turn influences text types and topics, the degree of technicality of the speech, its information density, input rate (source language speaker's delivery pace), duration, and so on. A very detailed classification of text types comes once again from Alexieva (1994) who identifies several parameters, including mode of production, functional content, use of non-verbal information (visual information, videos, slides, prosodic features, etc.), and degree of intertextuality with the other speeches in the same conference and with external sources.<sup>4</sup>

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<sup>4</sup> Another interesting text type classification is the one suggested by Hönig (2002), which was developed for teaching purposes, i.e. to provide a set of objective grades of difficulty of speeches used in training. The model incorporates criteria related to speech topic and structure and students' expected knowledge of the topic in question, as well as cohesion and coherence criteria, speech presentation parameters and parameters related to numbers and figures.

The above cursory glance at some of the variables involved in an interpreted event have highlighted the main obstacles hampering interpreting research. Our research project, which has resulted in the creation of the EPIC corpus and the EPIC multimedia archive, is an attempt to tackle these difficulties by selecting appropriate materials and processing them by using corpus analysis techniques.

The practical problem of access to interpreting data was solved by choosing the European Parliament (EP) plenary sessions. As is explained in more detail in (3.1), the Europe by Satellite (EbS) TV channel enables viewers to select different sound channels for different EU languages. This means that we were able to record both the original speeches and the interpreters' target speeches in Italian, English and Spanish. The material is in the public domain, and EbS authorizes viewers to use it for research and educational purposes. Moreover, the EP debates are published in the verbatim reports available on the European Parliament website, together with information on speakers and speeches (see 3.3).

As regards the methodological aspects mentioned above, the homogeneity of the material under analysis is ensured by the institutionalized setting in which the debates take place. Specific procedures are consistently followed, such as the rules for the allocation of speaking time to MEPs (Members of the European Parliament), the fixed structure of debates, etc. Consequently, text types, topics, speech duration and so on can be controlled when analyzing the material. EP interpreters, for their part, are all professionals who have passed a strict selection procedure, with similar degrees of expertise, if not experience. Moreover, they all work into their "A" language (i.e. into their mother tongue) and they have access to the same information sources to prepare before plenary sessions. Clearly, all EP interpreters enjoy similar working conditions, in that they use the same equipment and booths.

In short, this type of material seemed to offer a high degree of homogeneity and was therefore considered suitable for our research purposes (see 5.1). Section 3 describes how the material was collected and organized in the EPIC multimedia archive.

### **3 The EPIC multimedia archive**

As was explained in section 2, in order to create EPIC it was necessary to collect the materials and organize them in a multimedia archive. The EPIC multimedia archive comprises digital video and audio clips of both original and interpreted speeches. The recorded material was subsequently transcribed for later analysis (see 3.3). The multimedia archive is currently stored on the hard disk of a dedicated machine, but there are plans to upload it to an Internet server to enable external researchers to access the audio and video clips, as well as the EPIC corpus.

Creating the multimedia archive involved a series of challenges, ranging from recording the material, to choosing file formats, storing the files and so on. Moreover, efforts were made in order to keep any extra material that was "unintentionally" recorded but might prove useful for different applications other than research (see 5.2).

#### **3.1 Recording the EP debates**

The EP plenary sittings were recorded off the EbS news channel. When the simultaneous interpreting service is available, this satellite TV channel enables viewers to select different sound outputs for different EU languages. Thus, it is possible to listen to the original speakers or to the interpreters working in the various booths.

In our study, four satellite TV + video recorder workstations were used for each plenary sitting to obtain a recording of the original sound channel (abbreviated as "org"), and

recordings of the English, Italian and Spanish sound channels (that is, the interpreters working in the three booths – indicated as “int”). Following the EbS schedule, 4-hour videotapes were used. However, recording sessions were not monitored, resulting in most videotapes containing materials other than EP sittings too. Indeed, as well as the EP part-sessions, the EbS broadcasting schedule includes press conferences and stock footage which European TV channels can use when reporting on EU affairs. In some cases, the simultaneous interpreting service is provided for all EU languages, or it may be restricted to English, French and/or German, or not be available at all. As a consequence, several press conferences were “unintentionally” recorded too. Though such material is not directly linked to the EPIC project, it was decided to store it in a separate archive for pedagogical purposes, as is being done in other institutions (see for example de Manuel Jerez 2003; Carabelli 2003; Gran et al. 2002).

About 2 video tapes per day per language were needed, amounting to 28 tapes for each plenary part-session: overall, 140 videotapes in total, covering 5 part-sessions held from February to July 2004. All the recordings thus obtained had to be digitized, in order to easily select the sections to be studied. The digitization process is still ongoing.

### 3.2 Digitizing the recordings

The videotapes with the recordings of the original speakers are being digitized as video files, as visual information is potentially useful for later analysis of the corpus. By contrast, the interpreted speeches are digitized as audio files, since the images on the videotapes are exactly the same (i.e. the plenary speakers), whereas our interest lies in audio information (i.e. the interpreters’ performances). For each plenary sitting, one video file (the original debate in which all the EU languages may be used as official languages) is thus obtained, together with three audio files containing the same speeches simultaneously interpreted into English, Italian and Spanish.

The original speakers’ recordings are converted into digital video files by using *Pinnacle Studio (9.0)*, a video-capture and editing software program. The chosen format for the video files is “.mpeg1”. The recordings of the interpreted speeches are digitized by using *Cool Edit-Pro 2.0*, a sound editor. The chosen format is the “.wav” format (sample rate = 32.000; channel = mono; resolution = 8 bit), which ensures very good audio quality for possible future studies of prosodic features (distribution of pauses, hesitations, etc.). As was mentioned in (3), there are plans to upload the EPIC archive to a dedicated Web server from which researchers will be able to download the clips. When the project reaches that stage, the “.wav” clips will be converted into a lighter format, probably “.mp3”, which would not affect audio quality for users.

When the digitization process of a video tape with the full recording of a plenary sitting has been completed, all the original speeches made in Italian, English and Spanish and their corresponding interpreted versions are selected and saved as individual clips.

Overall, the EPIC multimedia archive includes video clips of all the source language speakers in Italian, English and Spanish, audio clips of the corresponding interpreted versions into two of the three languages involved and the transcripts of both types of spoken material. The transcription process was one of the most challenging parts of the study. Section 3.3 outlines how the material under study was transcribed and provides some useful suggestions on how to ease and speed up the transcription process by using speech recognition programs.

The multimedia archive also contains the full recordings of the part-sessions with speeches potentially in all the other EU languages (depending on the MEPs who took the floor on that particular day), as well as the recordings of a number of press conferences. Some

of the latter feature one or more interpreted versions: all this material is archived and classified for future studies and pedagogical applications.

### 3.3 Transcription

Once the video and audio digital clips are ready, the material must be transcribed, in order to process and analyze it. As was mentioned in section 1, transcribing spoken material is a demanding and time-consuming task.<sup>5</sup> The material in EPIC is transcribed with a view to building a large amount of data which can then be analyzed automatically, i.e. the transcripts must be machine-readable. However, efforts were made to ensure that the transcripts were also user-friendly, so that anybody would be able to use the EPIC material for their studies. Therefore, we decided to produce very basic orthographic transcripts, with a minimum amount of linguistic and paralinguistic information (Shlesinger 1998a).

We have developed a “transcription procedure” that consists in producing a draft transcript very rapidly, which is then revised several times until it becomes a final draft. In order to produce the preliminary draft of the source speeches, the official verbatim report of each EP sitting, available on the Internet, is used as a basis. The speech features which EP officials routinely correct in the verbatim reports (unfinished sentences, mispronounced words and ungrammatical structures, for example) are re-inserted once again whilst listening to the recordings. Moreover, punctuation is eliminated from the transcripts.

All the target (interpreted) speeches have to be transcribed from scratch. Speech recognition software programs (*Dragon Naturally Speaking* and *IBM Via Voice*) are used to obtain the preliminary drafts which later undergo a revision process. As we are trained conference interpreters, we listen to the recording and repeat aloud what the interpreter says at the same time, that is to say, we apply the shadowing technique (Schweda Nicholson 1990; Lambert 1992). The speech recognition programs are trained to recognize our voices, and produce a draft transcript automatically.

Extra-linguistic data are recorded in a specially-designed header with information about the speech (e.g. duration, mode of delivery, average speed, etc.) and the speaker (e.g. name, nationality, gender, political function, etc) in each transcript. The header fields are also used to set the search parameters in the EPIC web interface (see 4). These search parameters allow users to query only a section of the corpus by selecting speeches on the basis of speech and/or speaker characteristics. This mechanism also allows for fast selection of the materials for teaching purposes (see 5.2).

## 4 The EPIC corpus

One of the first responses to the practical and methodological challenges described in §2 is EPIC, an interpreting corpus in the technical sense of the word (as used in corpus linguistics), that is to say, an electronic collection of transcripts of European Parliament speeches and their interpreted versions, in three languages (Italian, English and Spanish). The speeches were delivered during EP plenary sittings by MEPs, by the EP President and Vice Presidents, by European Commission and European Council representatives, and by guests from EU and non-EU countries. The interpreted speeches were produced by the EP interpreters working during those sittings.

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<sup>5</sup> A fuller account of transcription methods and conventions used in EPIC can be found in Monti et al. (forthcoming).

EPIC is an open corpus, in that it will be expanding over time as more data is added to it. By date, one part-session (February 2004) is available for study, corresponding to about 18 hours of transcribed material. Other part-sessions (two in March, one in April and one in July 2004) are being processed and will be added to the corpus as they become available.

As was previously mentioned, EPIC is a trilingual corpus and each source speech in one language (from among Italian, English and Spanish) is accompanied by the corresponding target versions in the other two languages. In this sense, EPIC is not a single corpus, but is made up of a collection of 9 sub-corpora, namely 3 sub-corpora of source texts (original speeches) and 6 sub-corpora of target texts (simultaneously interpreted speeches), to which 6 sub-corpora of aligned texts will be added as a next step in the project. Table 1 shows the structure of the corpus and its present size:

sub-corpus	n. of speeches	total word count	% of EPIC
Org-en	81	42705	24%
Org-it	17	6765	3.8%
Org-es	21	14468	8.2%
Int-it-en	17	6708	3.8%
Int-es-en	21	12995	7.3%
Int-en-it	81	35765	20.1%
Int-es-it	21	12833	7.2%
Int-en-es	81	38435	21.6%
Int-it-es	17	7073	4%
<b>TOTAL</b>	<b>357</b>	<b>177748</b>	<b>100%</b>

Tab. 1 Composition of EPIC

Finally, and most importantly, EPIC is machine-readable. In order to make automatic analysis possible, the corpus is POS-tagged and lemmatized by using specific taggers, namely the *Treetagger* for the English language, a combination of taggers proposed by Baroni et al. (2004) for the Italian language and *Freeling* for the Spanish material. Then, the material is encoded by using the *IMS Corpus Work Bench* platform (Christ 1994), which enables users to carry out simple and advanced queries by using the *CQP* query language of *CWB* (Bendazzoli et al 2004; Monti et al. forthcoming). The corpus can be queried through a dedicated web interface that is available on the Forlì School for Translators and Interpreters' development website, hosting a number of resources for linguists, translators and terminologists<sup>6</sup>:

The EPIC web interface enables users to carry out queries to retrieve and analyze material of interest, either in the whole corpus or by restricting the search through the use of speech- and speaker-related search filters. Thanks to these filters, based on the header fields contained in each transcript, it is possible to restrict queries on the basis of specific characteristics, such as speakers' political function, country of origin, speech mode of delivery, speech length, duration, and so on.<sup>7</sup>

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<sup>6</sup> <http://sslmitdev-online.sslmit.unibo.it/corpora/corpora.php>

<sup>7</sup> For more details on the tagging process and the development of the EPIC web site, as well as the available search filters, see Monti et al. (forthcoming).

## **5 Research and pedagogical applications**

### **5.1 Research: corpus-based interpreting studies**

Electronic corpora have long been awaited in Interpreting Studies in order to validate the many hypotheses and theories suggested by scholars on interpreters' strategies and the interpreting process (Shlesinger 1998a). Most interpreting research is still based on small case studies which are conducted through manual analysis or exploit semi-automatic analysis in very limited terms. Moreover, the creation of a multilingual parallel corpus of interpreted speeches and their corresponding source speeches also offers the opportunity of comparing more translations of the same text, something which is not often possible, as pointed out by Kalina (1994:227): "In studying real-life conditions and professional interpreting [sic], one problem is that one will rarely find several interpreted versions of the same text, a fact which makes direct comparison impossible".

Once EPIC reaches larger dimensions and the various sub-corpora are of matching sizes, it will be possible to provide results that are based on statistical measures and corroborate hypotheses on the basis of a significant number of occurrences of a given feature. Moreover, since EPIC transcripts are tagged, lemmatized and encoded, they can be searched not only on the basis of word forms, but also on the basis of the corresponding parts of speech, lemmas and possible pronunciation disfluencies.

The present level of transcription and annotation offers various research opportunities, such as studying lexical patterns, frequency lists, concordances (Partington 2001:47), collocations, use of prefixes and suffixes, and so on. Generally speaking, various lines of research already developed in corpus-based translation studies (see for example Bowker 2002; Laviosa 2002) could be followed in exploring the corpus. Incidentally, such explorations of the EPIC corpus may not only reveal interesting characteristics of the material itself, but may also shed light on the differences between translation and interpreting.

EPIC can be explored either as a parallel or a comparable corpus. As regards EPIC as a parallel corpus, the next step in the project envisages the content alignment of source and target speeches. Thus, six more sub-corpora of aligned speeches will become available, making it possible to carry out semi-automatic queries using the web interface already described above. The aligned corpora will make it easier to carry out studies on quality features and specific interpreting strategies. Moreover, considering the main research interest of the group, i.e. directionality, the multilingual and multidirectional nature of the EPIC corpus will enable us to focus on the possible differences depending on the language pair (between two Romance languages or one Romance and one Germanic language) and language direction (from a foreign language into the native language or vice versa). As highlighted by Johansson (1998:6-7), "to distinguish between what is language-specific, and what is general, it is useful to turn to translations of the same source texts into a variety of languages".

If EPIC is explored as a comparable corpus, the 9 sub-corpora of original and interpreted speeches can be grouped on the basis of language, thus allowing for studies that compare original English, for example, and the English used by simultaneous interpreters. "Interpreted English" can then be further analyzed to see whether there are any differences depending on the source language (in our case, either Italian or Spanish). Indeed, the first attempt to explore EPIC and exploit its research potential using semi-automatic analysis was a study on lexical patterns in simultaneous interpreting (Sandrelli and Bendazzoli 2005 forthcoming) to verify Laviosa's findings on non-translational (original) and translational English (Laviosa 1998) and see whether her results also apply to original and interpreted

English and original and interpreted Italian.<sup>8</sup> As this was the very first exploration, great efforts had to be made to correct unexpected flaws in the system and master the necessary techniques of analysis.

Finally, it must be pointed out that, given the user-friendly nature of our transcripts, it should be fairly easy to add further levels of annotation, such as linguistic, paralinguistic or extra-linguistic features (Leech 1997:5). Examples include pauses, false starts, syntax, prosodic features and even speakers' body language, humor, etc.

## **5.2 Pedagogical applications: multimedia archive materials**

The potential pedagogical applications of the EPIC multimedia archive concern both foreign language teaching (especially for L2 students) and interpreter training. Source speeches are potentially of interest to both groups of users, whereas interpreted speeches are a useful resource for trainee interpreters.

As regards foreign language teaching, the video clips of the source speeches can be used for listening comprehension exercises. The availability of the speech transcripts can further help students, who can read the text after listening to the speech and then focus their attention on any unknown words or structures.

Moreover, listening exercises are also useful for improving students' pronunciation skills in the foreign language. An example of pronunciation exercises based on the archive (which, as was explained in (3), includes recordings in all the EU languages) is the series of German materials for the SPT-Sound Perception Trainer course aimed at the students of the Forlì School for Interpreters and Translators (Kaunzner 1997).

A potential application which may be of interest to both L2 learners and trainee interpreters is the comparative study of rhetorical devices employed in EP speeches. The availability of source speeches in the three languages offers students the opportunity to compare the different rhetorical devices and stock phrases used in English, Italian and Spanish formal speeches, and, more specifically, the special features of language typical of the EP context (EU jargon and other conventions). Moreover, the verbatim reports published on the EP website can be compared with the actual transcripts of the source speeches, in order to identify the main differences between spoken texts and polished written texts.

In this regard, the EPIC corpus, as well as the multimedia archive, can be used as a teaching tool, in that it enables students to carry out targeted searches for specific structures and expressions in all three languages, along the lines suggested by Zorzi (2001), who discusses how to teach the use of discourse markers by using spoken corpora. Moreover, the "topic" search parameter enables students to study the features of speeches by topic, that is, on politics, economics, health, and so on. The "Procedure & Formalities" option may be of particular relevance to trainee interpreters who can use it to study the specific formulaic language used in all of their working languages in the EP context.

Two applications which are more directly relevant to interpreter training are the use of EPIC video clips and transcripts as practice materials, and the use of the EP interpreters' target speeches for self-assessment purposes. As regards the former, EPIC source speeches may be used by trainers during classes to present students with real-life assignments. The speech classification system implemented in the headers of the transcripts and searchable via the EPIC Web interface is a useful source of information for teachers when selecting class materials. In particular, teachers may choose speeches by speed, topic, accent, etc. If a selected clip is considered too difficult to interpret for the specific stage reached by the

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<sup>8</sup> The Spanish materials in EPIC will be included in a future study.

students, it can be edited by using *Cool Edit* or similar software tools, for example to divide it into several clips, to slow it down without altering the speaker's pitch, to insert pauses in the speech, etc. Moreover, the type of materials available through EPIC are ideal for use in any CAIT (Computer Assisted Interpreter Training) software tool (cf. Sandrelli 2007, Sandrelli 2003a, 2003b; Carabelli 1999, 2003; Gran Tarabocchia et al. 2002).

The target speeches produced by EP interpreters may find an application in the training of student interpreters too, in that they offer a useful demonstration of professional interpreting standards. Students may be asked to interpret a speech from the archive, either in class or in their individual study time. The recording of their performance can then be compared with the corresponding professional interpretation available in the archive. The assessment exercise may be carried out in class together with other students and under the guidance of a teacher (co-assessment), or in privacy (self-assessment). In both cases, it may contribute to enhancing students' awareness of their strengths and weaknesses, thus giving them useful indications for future work.

## 6 Conclusions

The Directionality Research Group was originally set up to carry out a research project on directionality in interpreting. In its first year of activity, the group has produced two tools: the EPIC multimedia archive and the EPIC corpus, which is available to the whole research community on a dedicated web page.

As was mentioned in (3) and (4), work is continuing to expand both tools. The multimedia archive, created as a source of materials to be transcribed and analyzed via corpus linguistics techniques, has turned out to hold great multidimensional potential for teaching purposes, as was outlined in (5.2). The archive can also be integrated with other materials for teaching purposes as well, such as pages from the EP website, which provides a wealth of extra information about speakers and debated issues.

The EPIC corpus, on the other hand, is the first publicly available corpus of original and interpreted speeches in three European languages. It is hoped that its exploration will yield interesting results which will contribute to interpreting research on general, language-specific and directionality-related interpreting strategies, and at the same time will inform about teaching methods.

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**Gertrud Hofer (Zürich)**

# Court Interpreting: Practical Experience and Implications for Training Interpreters

## Contents

- 1 The Language Situation in Switzerland
- 2 Court Interpreting in Switzerland
- 3 The Court Interpreting Project in the Canton of Zurich
- 4 The Future Development of Court Interpreting
- 5 Final Remarks
- 6 References

## Abstract

In the course of the 20th century, Switzerland became far more than quadrilingual due to migration. On account of this linguistic change, the need for interpreting rose considerably and has continued to rise. Most of the languages that need to be interpreted for Swiss authorities and institutions are languages for which no accredited interpreter training exists in Switzerland. Many interpreters thus lack professional skills in or even basic knowledge of interpreting and notation techniques and lack awareness of the interpreters' code of ethics and of their professional role. Moreover, many interpreters have insufficient competence in one of the languages of the interpreting pair and/or in the complex syntactic structures and specialized terminology required. Many also lack the special background knowledge assumed in various areas, be it medical, educational or legal. In these cases, the quality of interpreting is unlikely to be satisfactory and communication is hampered or even fails completely. These communication problems are shared by Switzerland and many other countries; it is precisely here that institutes of translation and interpreting can suggest new solutions. The paper outlines initial steps towards heightened expertise and professionalism in public interpreting services: since 2003 a basic educational program for court interpreters has been offered in the Canton of Zurich.<sup>1</sup>

## 1 The Language Situation in Switzerland

Four official languages are a standard feature of Switzerland: for about two hundred years the four national languages - German, French, Italian and Romansh - have been spoken to varying degrees in various regions of the country. Every child grows up with food labels in two or three languages, and people are accustomed to interpreting services if they watch elections to the Federal Council or other parliamentary sessions on TV or listen to radio broadcasts of them.

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<sup>1</sup> I would like to thank the Interpreting Group under the presidency of Peter Marti, followed by Anton Schärer, as well as Councillor Notter of the Canton of Zurich legislature and the Public Prosecution Office of the Canton of Zurich (*Oberstaatsanwaltschaft*) for their commitment to the professionalization of court interpreters. Without their support, educational programs could not have been offered to practicing court interpreters. I am confident that these professional development courses will contribute to better understanding of court interpreting as a field and to a significant improvement in the quality of court interpreting in Switzerland.

Since the middle of the 20<sup>th</sup> century, migration has expanded the spectrum of languages considerably, leading to a new multilingualism in Switzerland. As a consequence, the need for interpreters has grown considerably, especially for languages for which few or no educational programs are offered. A recent report by the Federal Office of Statistics (Lüdi & Werlen 2005) revealed some surprising results on native speaker use of languages in Switzerland in 2000. Although the three most frequently used languages were national languages of Switzerland (64% German, 20% French, and 6.5% Italian), the fourth most frequent language was Serbo-Croatian. A total of 9% percent of the population in Switzerland spoke non-national languages, representing a considerable change in the second half of the 20<sup>th</sup> century. In Fig. 1 these languages are plotted according to their frequency of use in the population. Of course these statistics vary from region to region, and the numbers are not even the same for major cities such as Zurich and Geneva. Nevertheless, they are especially interesting in the context of interpreting because they show that almost half of the 10 most frequent languages used in Switzerland are not regularly taught in Swiss schools and are not part of the usual interpreting versions at translation and interpreting schools.

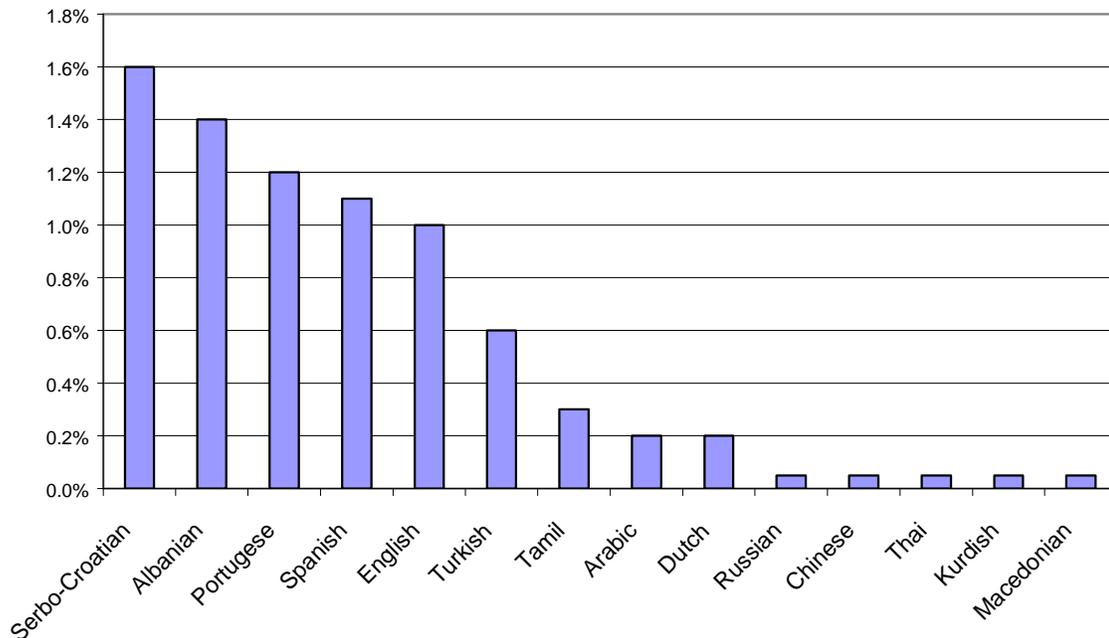


Fig. 1: Percentage of Swiss population by native language (taken from Lüdi & Werlen 2005).

The various language groups form communities with clear boundaries to their surroundings, yet individual members still have to communicate with their host country, sometimes in the form of “forced contacts” with refugee organizations, social institutions, medical doctors, psychiatrists, teachers, police, courts and so on. These contacts present different degrees of complexity for interpreting tasks in a variety of communication situations.

Multilingualism has an impact not only on communication itself but, of course, also on costs. One example is in the police offices and courts in the Canton of Zurich. There has been a considerable increase in the number of criminal proceedings and in the use of interpreters recently. Expenses for court interpreting in the Canton of Zurich alone amounted to CHF 5 million in 2003 and CHF 7 million in 2005 (personal communication). On the basis of these figures, it can be inferred that detention and penal authorities must be depending on

interpreters to an increasing degree although at present there are no data on the exact number of interpreted interrogations, legal examinations or trials.

## 2 Court Interpreting in Switzerland

Only very seldom do professional conference interpreters choose to work for federal or cantonal authorities or the criminal courts<sup>2</sup> because of the low salaries and the comparatively poor working conditions (e.g. lack of access to records). Although court interpreting has gained importance throughout Europe in the past few decades and courts and other public authorities have to rely on interpreting services for numerous languages, there have been few formal training programs up to now. The educational background of court interpreters varies from doctoral degrees to very limited education and correspondingly few can learn to interpret professionally on their own. Thus heterogeneity is one of the most difficult aspects for the authorities and the courts (and of course also for educational institutes).

Irrespective of the various levels of interpreting quality, there are regulations stipulating the involvement of court interpreters. The most important of these in Switzerland, established in the federal constitution (Art. 29), are binding for cantonal courts and judges and guarantee the right to a fair trial, meaning that no one should suffer discrimination because of language. Furthermore, every individual in Switzerland has the right to receive equal and fair treatment by legal and administrative authorities (Art. 1), and contesting parties have the right to a legal hearing (Art. 2). At the European level, the Convention for the Protection of Human Rights and Fundamental Freedoms (Art. 5, para. 2 EMRK) establishes correspondingly strict rules: *Everyone who is arrested shall be informed promptly, in a Language which he understands of the Reason for his Arrest and of any Charges against him.* Switzerland has consistently implemented the Convention for the Protection of Human Rights and Fundamental Freedoms since joining the Convention in the year 1974.

Utmost diligence, correctness and completeness are indispensable in legal proceedings when acquittal or sentencing is at stake. Unprofessional interpreting or translating can therefore have serious consequences for the language mediator involved. The Swiss Criminal Code (Art. 307, para. 1) stipulates that translators and interpreters can be charged and sentenced to up to five years for misrepresentation or mistranslation.

According to information from the Supreme Court of the Canton of Zurich, an interpreter has to be present in approximately 50% of all criminal justice cases and the number is on the increase (personal communication). The languages concerned have changed with subsequent waves of migration: in the 1960s Italian, Spanish, and Portuguese became increasingly common in Switzerland whereas in the 1970s Arabic and Turkish were the new languages. In the 1980s the use of Lebanese, Latin American Spanish, and African languages increased, and since the 1990s the languages from Eastern Europe have become more frequent (as shown in Figure 1). Not surprisingly, the courts in the Canton of Zurich have experienced an increase in the number of interpreters and languages covered: as of 2005, 130 different languages are listed, covered by over 962 interpreters (Table 1). In 2003, there had only been 560 interpreters.

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<sup>2</sup> In civil proceedings, the contesting parties often do engage professional conference interpreters.

Language	Number of Interpreters		Language	Number of Interpreters	
	2005	2004		2005	2004
English	164	125	Italian	80	66
Serbian	161	139	Turkish	69	57
Croatian	155	137	Arabic	69	55
French	140	90	Albanian	67	59
Spanish	128	97	Portuguese	50	36
Russian	112	75	Chinese	26	22
Bosnian	100	75	<b>Total: 130 (120)*</b>	<b>962</b>	<b>818</b>

Tab. 1: Number of court interpreters registered for various languages in the Canton of Zurich.

\* The number in brackets refers to the total number of languages in 2004. The total number of interpreters does not correspond exactly to the actual number of court interpreters, because some of them are registered for several languages and are therefore counted more than once (for example, many interpreters of African languages also interpret to and from English).

The changes in distribution of language groups in Switzerland are comparable to those in neighboring countries such as Germany (Kalina 2001) and Austria (Kadric 2001). As a consequence of them, new training programs have been developed in several parts of Europe since the end of the 20<sup>th</sup> century. The demand on the part of interpreters for professional development programs is rising, and court interpreting as a field of study has gained importance. Researchers from areas like translation studies and sociology have been pursuing the topic over the past few years (cf. Driesen 1998, 2002; Kadric 2001; Pöchhacker 2001; Pöllabauer 2002) and have demonstrated that the situation in court interpreting in Germany and Austria presents similar problems to those in Switzerland.

### 3 The Court Interpreting Project in the Canton of Zurich

#### 3.1 Background

As mentioned above, courts, police, and immigration officers in the Canton of Zurich have a register of interpreters from which judges and police officers appoint an interpreter in a specific case. Prior to 1999, the professional status of interpreters at police stations and in courtrooms was only loosely regulated: persons registered were not tested as to their interpreting skills or competence in their respective languages, and there were no training programs. The quality of interpreting was quite often low, as was the appreciation of the court authorities for interpreters.

In 1999, political intervention in the Canton of Zurich prompted a closer examination into court interpreting. The reason for this intervention was not concern about quality but high costs. One of the interpreters had charged more than a quarter of a million Swiss francs to the

District Court of Zurich for interpreting services in 1998. However, when the parliament of the Canton of Zurich scrutinized the level of salaries for court interpreters, they discovered that the legal status of interpreters as well as their level of qualifications had to be discussed rather than the costs, which turned out to be justified.<sup>3</sup> Contrary to other areas, such as educational settings, costs for interpreters in courts cannot be reduced since laws stipulate their presence.

After the parliamentary intervention in the Canton of Zurich in 1999, awareness of the need for better qualified court interpreters increased and efforts to professionalize court interpreting intensified. The cantonal parliament therefore ordered the institutionalization of an “Interpreting Group”, an adjunct to the Supreme Court of the Canton of Zurich, to be responsible for the introduction and development of educational programs, for the administration of the register of interpreters as well as for the selection, suspension, or expulsion of interpreters from the register. In January 2004, an ordinance on interpreting came into effect.<sup>4</sup>

### 3.2 New Regulations

The aim of the interpreting ordinance is to unify formalities for interpreters (e.g. tariffs and contracts), clarify their legal status, and professionalize their work. In an initial step, the competencies of interpreters had to be defined. As the Interpreting Group was responsible for the quality of interpreting and translation services for the courts and authorities in the Canton of Zurich, the members of the Group worked out a set of guidelines and decided which qualifications were indispensable for interpreters. In the ordinance on interpreting the Interpreting Group focused on three criteria for the registration of interpreters: personal requirements, ethical and legal principles, and professional qualifications.

- **Personal requirements** specify that interpreters must have a work permit, Swiss citizenship, or a residence permit and have no criminal record. They also include reliability, punctuality, stress resistance, and availability. These criteria are necessary but are not sufficient to guarantee professional, competent interpreting.
- **Ethical and legal principles** cover neutrality, responsibility, confidentiality, and loyalty to the employer. Neutrality must be understood and ensured: untrained interpreters might mistakenly understand their role as advocates for compatriots and misrepresent content. Interpreters must also be bound by confidentiality: they are forbidden from transmitting information to uninvolved parties (cf. Criminal Law Art. 320).
- **Professional requirements** cover an understanding of legal procedures in courts and of corresponding terminology. Court interpreters must also have mastery of two languages and extensive knowledge of the relevant cultural background. In addition, their work demands knowledge of interpreting and notation techniques as well as of the code of ethics.

The professionalism strived for in the guidelines was to be reached by “selection, training, and control”, and the Interpreting Group had to suggest the appropriate measures to be taken.

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<sup>3</sup> The charge was high because of telephone checks that were extremely time-consuming and not because the interpreter was paid so well.

<sup>4</sup> *Dolmetscherverordnung* November 2003 (see [www.obergericht-zh.ch](http://www.obergericht-zh.ch)), only available in German.

### 3.3 Involvement of the Institute of Translation and Interpreting

Since the members of the Interpreting Group were judges, public prosecutors, police, and immigration officers, but not interpreters or linguists, they turned to the Institute of Translation and Interpreting of the Zurich University of Applied Sciences Winterthur (ZHW) for help in defining the language and professional requirements for court interpreters.<sup>5</sup> The results of the collaboration were incorporated into the Interpreting Group's guidelines, which took effect in January 2004,<sup>6</sup> and the two institutions laid the groundwork for an educational program for court interpreters.

Discussions with representatives of immigration courts and police officers as well as participation in interpreting services at trials, interrogations, and legal examinations served as further preparation for the development of educational measures. The following deficits were identified as the most frequent:

- limited knowledge of the legal system and terminology
- insufficient knowledge of interpreting techniques and of the role of interpreters
- lack of language competence (particularly in German)

In accordance with the guidelines, court interpreters already working for the authorities and courts were offered a two-day course for which each institution designed one training day (see section 3.4).<sup>7</sup> The first pilot course started in November 2003 and was followed by two more in January and February 2004. All three courses were subsidized by the Interpreting Group.

### 3.4 Basic course for court interpreters

After the three pilot courses with 52 court interpreters in the winter of 2003/04, a basic course was institutionalized for all court interpreters listed in the Interpreting Group register. The concept for the two-day course is based on the need for specialized knowledge, interpreting and notation techniques, awareness of the code of professional ethics, development of speech training, and interpreting practice.

#### *Aims of the course*

The Interpreting Group's aims for the two-day courses are to professionalize court interpreters and to revise the list of registered interpreters in order to ensure high quality. Court interpreters must be able to interpret complex issues completely and correctly and must have a professional attitude towards interpreting. The course also pursues the goal of improving the reputation of court interpreters.

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<sup>5</sup> Since its inception in 1999 the Institute's Center for Continuing Education has focused on the interface between languages and professional areas. Language and the law is an area it has specialized in from the very beginning.

<sup>6</sup> *Merkblatt*, January 2004 (see [www.obergericht-zh.ch](http://www.obergericht-zh.ch)), only available in German.

<sup>7</sup> Switzerland is by no means the first country in which measures for better qualifications of interpreters have been taken. In Europe, various educational programs have been developed in the past decades, with Germany and Austria serving as models for the Swiss program. The educational program in Magdeburg-Stendal preceded the Swiss program and was designed for a similar public with a comparable spectrum of languages, and there is also an educational program for these languages in Vienna. Representatives from both Magdeburg-Stendal and Vienna inspired and contributed to the conception of the court interpreting program in the Canton of Zurich.

### *Admission*

Participants are selected by an admission procedure that guarantees the level of the course corresponds to its aims:

- Education: at least 9 years of schooling, completed compulsory education, or professional experience. These criteria are difficult to check from an administrative point of view.
- German test for non-native speakers: the German competence of non-native speakers certainly cannot be trained in two days, so candidates should be tested if they do not have a diploma certifying a level in German corresponding to C2 of the European portfolio.<sup>8</sup> High competence in German is essential for court interpreters to be able to interpret correctly and precisely even under pressure and without the help of dictionaries.

### *Content*

The following subjects are covered in the two-day basic course:

- legal and political specialized knowledge
- professional ethics and the role of an interpreter
- theory of interpreting techniques (consecutive interpreting, whisper interpreting, sight translation)
- interpreting practice (with language-independent exercises because of the impossibility of covering all conceivable language combinations, such as Arabian, Igbo, Urdu, etc.)
- speech and breathing techniques

### *Exam*

About a month after the basic course there is an exam comprising a written (specialized knowledge) and an oral section (professional ethics, interpreting techniques as well as German/German language-independent interpreting). The court interpreters are tested by faculty from the Institute for Translation and Interpreting. In order to ensure that the standard of the exam corresponds to the requirements of authorities and courts, the Examining Board includes representatives of the Interpreting Group commissioners. Upon successful completion of the exam, candidates are officially registered as court interpreters in the Canton of Zurich. The courts and penal authorities are then assured of at least a basic level of knowledge and skill.

### *Feedback by course participants*

Feedback is requested of all course participants with a view to continually optimizing course content and presentation. An example of the average evaluation of a recent course can be seen in Fig. 2. The 18 participants of this particular basic course evaluated the competence of the instructors most highly but were less satisfied with the volume of the course material and practicability.

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<sup>8</sup> C2 is the highest level in the European Portfolio. Non-native speakers can understand everything they hear and read and can summarize information from various written and oral sources and can render explanations and justifications very accurately. They can express themselves precisely and distinctly and can describe complex relations and nuances.

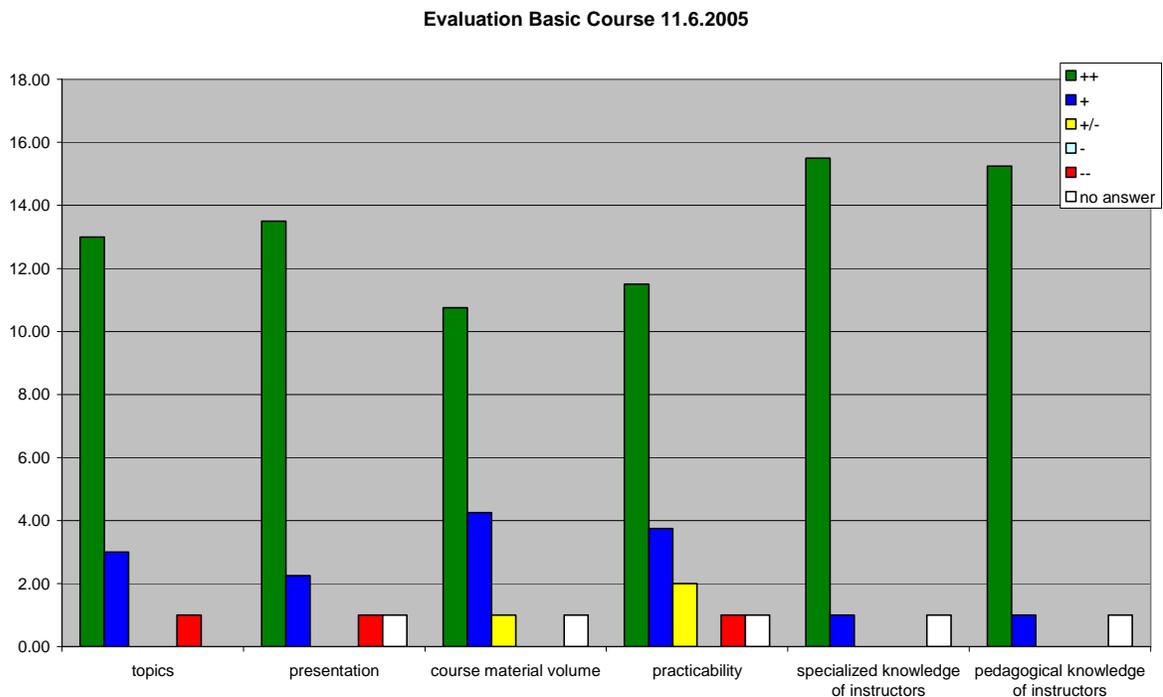


Fig. 2: Feedback by 18 participants of a Basic Course for court interpreters.

#### *Strengths and weaknesses of the basic course*

The number of proceedings with cantonal and federal authorities as well as in the courts mean that a sufficient number of interpreters must be available but the Interpreting Group demands increased professionalization, a review of the register, and improvement in the standard of court interpreting. Designed to achieve this balance, the strengths of the basic course are:

- fostering professionalization by bottom-up model
- meeting education requirement for court interpreters
- teaching by experienced interpreters
- including course content based on close cooperation of the Center of Continuing Education (ZHW) with clients (Interpreting Group representing the courts of the Canton of Zurich, immigration office, cantonal police, and penal authorities)

Inherent in this quality management process is the risk of losing a disproportionate number of interpreters because of higher standards and the difficulties in certifying enough court interpreters within a reasonable period of time. Some weaknesses of the Basic Course at present are:

- exclusion of rare minority languages
- heterogeneity of groups in the course (with respect to language competence and specialized knowledge)
- lack of testing of native languages other than German

During the transition period at the moment, both less qualified interpreters and better qualified interpreters are working in the courts because basic courses and qualifying exams are still in

progress or planned. Far more court interpreters would like to attend these courses than have had the opportunity to do so. Within the next two years, all court interpreters in the Canton of Zurich should have had the chance to attend a basic course.

### **3.5 Outcome of the basic course**

When the three pilot courses were first advertised there was an enormous response. Most of the court interpreters not only needed (further) professional training, they also wanted to learn more about interpreting. About 300 applicants responded immediately, yet for pedagogical reasons we started with only 52 participants.

In addition to the aims of the course outlined in 3.4, we found it necessary to react to several misconceptions about interpreting mentioned by the pilot course participants such as:

- being allowed to ask questions at court or in police offices if they do not understand
- being in the position to offer legal explanations or even advice
- judging their own capabilities.

Because of the great interest in the pilot courses the Interpreting Group decided to offer the educational program on a regular basis and continue to subsidize it. The basic course has been compulsory for new applicants since April 2004 and will become so for all court interpreters by the end of 2006. The courses and exams are thus being used as a selection instrument for court interpreters in the Canton of Zurich. Although the basic course is not yet compulsory, almost one-third of all court interpreters had already enrolled in the program by July 2005. The huge increase in applications surprised both institutions (the Interpreting Group and ZHW Center for Continuing Education): obviously the training program meets a deficit experienced by a majority of court interpreters. By July 2005, eleven courses had been offered, with a total of 198 participants.

Of the 171 candidates who have taken the exams to date, 125 (73%) passed. Although the basic course is only two days long and the evaluation of the exams still has a preliminary character, they make it apparent whether candidates have acquired the specialized knowledge, whether their competence in German actually corresponds to C2 when interpreting, and whether they have analytical competence and a gift for interpreting.

Interpreters who successfully pass the exams receive more commissions from authorities and courts after their qualification, and those who fail the exams are suspended or excluded from the register. Some others decide to remove their names from the register even before they attempt the exam. The heterogeneity among course participants, a well-known problem of most courses offered by centers of continuing education, has the advantage here that interpreters can compare their competence and performance with other members in the course; in the process some realize that they had underestimated the interpreting profession and that interpreting is more than just speaking two languages.

Somewhat to our surprise, the tightening of requirements does not necessarily lead to fewer court interpreters on the register but, because of the steadily rising number of applications, to better trained, more efficient ones. The training programs in the Canton of Zurich also benefit court interpreters from other cantons as well as interpreters active in other fields, above all in medicine and education. Interest from interpreters in other parts of Switzerland and other fields may be a possible explanation for the increase in applications.

### 3.6 Reactions from the Supreme Court of the Canton of Zurich

After the pilot courses, the Interpreting Group evaluated the results of the courses and exams. The primary reasons for unsatisfactory performance in the exams were a lack of specialized knowledge and a limited ability to interpret.

*What the Interpreting Group experienced in the exams:*

- a word-for-word translation is not the basis for good interpreting
- language competence in two languages has to be high
- interpreting demands analytical skills
- preparation is a necessity
- access to information (which may include records) is essential

*Measures*

In addition to the two evaluation measures described in 3.4 for the basic course exam, the Interpreting Group implemented a third criterion for inclusion in the register, so there are three possibilities for selection, before and after the basic course as well as parallel to it:

- passing a high-level German exam (for which about 850 – 1300 teaching units are a prerequisite for non-native speakers of German)
- passing the exam after the basic course
- passing an interpreting test at the Center of Continuing Education (This additional criterion was introduced to test individual interpreters on demand if a judge complains about their performance.)

The decision about inclusion or expulsion from the register is always with the Interpreting Group. One of the difficulties with expulsion concerns critical languages such as Urdu or Igbo; these have to be covered even if the respective interpreters are not successful in the exams.

*Initial consequences: Seminar for the commissioners*

Over the last two years interpreting has become an important issue on the political agenda in the Canton of Zurich.<sup>9</sup> Proof of the broader commitment by the Supreme Court of the Canton of Zurich is the institution of a so-called lunch and learn seminar on the topic for commissioners. In discussions with the members of the Interpreting Group, it became obvious that commissioners have diverse opinions about the strategies, tasks, and competence of interpreters. Yet the commissioners can contribute considerably to good performance on the part of court interpreters. The commissioners have to become aware that a successful strategy is not based on literal translation or interpreting: interpreters render meaning, not just words. The commissioners should also understand the various interpreting techniques and their appropriate application in trials, interrogations, or examinations. The demanding task of court interpreters can be eased if they are given time for preparation and access to records. Court interpreting (in all settings) can only succeed if interpreters truly understand what is said. Of course, prerequisite to this is sufficient competence with respect to special knowledge, language, and terminology, as discussed above. This competence is not static, however; interpreters must adapt continually to new situations in courts and offices and acquire new

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<sup>9</sup> The President of the Supreme Court of the Canton of Zurich, Dr. R. Klopfer, confirmed the importance of court interpreting in an interview in the leading Swiss daily newspaper (NZZ 2005).

legal knowledge, vocabulary, and deeper understanding of words, concepts, and terms.<sup>10</sup> The lunch and learn seminar should serve to put the knowledge of interpreting techniques and principles on a par for all parties concerned.

## **4 The Future Development of Court Interpreting**

### **4.1 Open questions**

There are two pressing questions that must be considered in the context of court interpreting:

- Unknown language level

When migrant waves bring different languages into Switzerland, the courts and various authorities initially have difficulty finding interpreters. Obviously only few people are able to interpret at this stage, and sometimes court interpreters even come from neighboring countries with related languages. Just as the courts start finding interpreters more easily for a certain language, new languages arrive in Switzerland. In connection with recruiting court interpreters, there is also the issue of changing language competence and language attrition. Once immigrants become integrated in their host country, their language patterns can change and the local language (e.g. German in central and northern Switzerland) can become dominant. The children of such immigrants are even more integrated, since they are socialized and educated in German. The latter is usually their dominant language, with the other language potentially quite limited with a less elaborated code, used for household affairs and little else.

- Testing and developing competence in rare minority languages

How educational institutes can determine the language level of prospective interpreters is one of the most challenging issues when dealing with minority languages. In the educational program outlined in 3.4, the Center of Continuing Education is of course able to test whether court interpreters' German is at C2 level but finding instructors to test rare minority languages is more difficult. Even if it were possible to test court interpreters in all their languages, what measures should be taken if the languages are not elaborated enough, and how should we provide a program to improve the competence in these languages?

### **4.2 Further education**

A two-day course is not long enough to attain interpreting expertise but is an instrument to establish the basis for professional development. Because in two days some topics can only be touched upon (as reflected in the participants' feedback), more educational programs are being planned.

- Intermediate course: 8 days long (60 lessons), with the focus on interpreting, ethics of interpreters, various interpreting techniques, internet research techniques, and interpreting exercises. The exam includes sight translation (German-German) and consecutive interpreting (L1-L2).

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<sup>10</sup> Jan Engberg (2005) discussed the evolution of concepts with the example of "murder".

- Certificate course:<sup>11</sup> divided into two parts (specialized knowledge and interpreting), there are also teaching units on specialized translation of legal texts (judgments, divorce, contracts, etc.). The exam includes consecutive interpreting (L1-L2 and vice versa).
- Coaching for interpreters with rare languages who fail the exam.

## 5 Final Remarks

Court interpreting is one of the most difficult yet fascinating topics in translation and interpreting studies in the 21<sup>st</sup> century and will probably remain a common activity despite or even because of increasing globalization. As outlined above, court interpreters in the Canton of Zurich are being trained along the principles of conference interpreters, with interpreting skills taught by instructors in the ZHW degree program and instructors from outside Switzerland who teach court interpreters in their own countries. (The input about special areas is provided by various experts from the courts, penal authorities, migration offices, etc.).

The court interpreters' situation is generally quite special: they usually have little or no theoretical background in translation studies, because for many of them court interpreting is not actually their profession, but rather something they feel qualified for by virtue of having lived in a host country for a certain length of time or having been brought up with another language, such as Portuguese, Tamil, or Urdu. By contrast, prospective conference interpreters usually have high competence in German, English, French, Italian and/or Spanish and can participate in regular interpreting programs with training in three languages.

Court interpreters require a theoretical basis in interpreting and notation techniques, ethics, and so on but must also know about various legal topics and legal systems and be competent in the terminology of at least two languages. Court interpreters themselves are often unaware of these requirements, which are uncontested in interpreting literature. Quite often they also seem to lack the practical side of handling terminology, databases, and search techniques. Yet terminology is essential: it is the link between specialized knowledge and language competence (Budin 2002).

The newly developed basic training courses in Zurich are an opportunity for court interpreters to become more professional. It remains to be seen whether solid programs on various levels (basic, intermediate, certificate) can be established throughout Switzerland and elsewhere for court interpreters to achieve true professionalism. Training courses are primarily a chance for court interpreters to produce better performance, but they are also a chance to improve the reputation of the profession as a whole. Finally, it is to be hoped that international cooperation and standardization for court interpreting intensifies.<sup>12</sup>

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<sup>11</sup> These two additional programs are not part of the Interpreting Group's compulsory program as the basic course is, but the Supreme Court and the Public Prosecution Office of the Canton of Zurich (*Oberstaatsanwaltschaft*) under the leadership of Commissioner Notter are subsidizing the two programs substantially.

<sup>12</sup> I especially hope that European cooperation intensifies and would very much like to thank the organizers of the Euroconference 2005 in Saarbrücken for fostering cooperation.

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## Court Interpreter Training in a European Context

### Contents

- 1 Minimum standards for procedural safeguards
- 2 Presentation and evaluation of cross-language training
- 3 Responses and discussion of results
- 4 Conclusions
- 5 References

### Abstract

Today, there is a growing demand in Europe for translation and interpretation services in those languages for which, until now, there was no training offered. This, of course, meant that there were no professional translators and interpreters. The same situation can be seen in the field of court interpretation. This is one of the reasons why the European Commission has been working on the quality of translation and interpretation in courts and other authorities of the EU member states for several years. This paper presents a pilot training scheme for remedying this unsatisfactory situation and also investigates its didactic potential. Above all, it explores the question of whether it is possible to meet the increasing demand for qualified translators and interpreters by introducing alternative methods of training.

### 1 The EU sets minimum standards for procedural safeguards

The work undertaken by the Commission in this area deals with criminal proceedings in the EU member states. The Commission first carried out an extensive consultation process, the results of which were included in the proposal for a Council framework decision on certain procedural rights in criminal proceedings throughout the European Union.<sup>1</sup> The work of the Commission originates from the presidency conclusions of the Tampere European Council (15 and 16 October, 1999), which, among other things, formulate the mutual recognition of court decisions as a goal of legal policy at European level. However, it has proved very difficult to achieve the mutual recognition of court decisions. The examination of specific cases has shown that the EU member states have doubts as to whether the examined foreign decisions were made within a high-quality procedure. Hence, the Commission has assumed for years that the establishment of minimum standards for court procedures is an indispensable prerequisite for the full mutual recognition of court decisions. As regards criminal proceedings, this means that the rights of suspects and defendants should be harmonized within the EU, since a uniform protection level for suspects and defendants would make the application of the principle of mutual recognition much easier. The program of measures to implement the principle of mutual recognition of decisions in criminal matters from 15 January 2001 stipulates that the extent of the mutual recognition is linked with the existence and the contents of particular parameters that are decisive for the efficiency of the

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<sup>1</sup> Cf. COM(2004)328 final:  
[http://ec.europa.eu/justice\\_home/doc\\_centre/criminal/procedural/doc/com328\\_28042004\\_en.pdf](http://ec.europa.eu/justice_home/doc_centre/criminal/procedural/doc/com328_28042004_en.pdf)

criminal proceedings. According to the Council and the Commission these parameters contain mechanisms for the legal protection of suspects as well as the prescribed common minimum standards.

As professional mobility, tourism, migration and refugee movements are reaching new heights, the number of foreign defendants is also increasing in all the member states. The Commission is thus working on common minimum standards and putting the emphasis on the appropriate protection of foreign suspects and defendants. Organized crime is also increasingly spreading across the borders.

In February 2003 the Commission presented a Green Paper on Procedural Safeguards for Suspects and Defendants in Criminal Proceedings.<sup>2</sup> The aim of the Commission is to harmonize the rights of suspects and defendants on the basis of already existing international agreements (European Convention on Human Rights, Charter of Fundamental Rights of the European Union). The Commission's primary goal is to establish minimum standards. The legal basis of the proposal is article 31 of the Treaty on European Union in the version of the Treaty of Nice, which includes common action in the field of judicial cooperation regarding criminal cases. According to the Commission, the proposal for a framework decision represents the necessary addition to the measures regarding mutual recognition, whose aim is to improve the efficiency of criminal prosecution. The procedural rights determined in the proposal for a framework decision can be divided into five areas:

1. the right to (free) legal advice
2. the right to the interpretation and translation of important documents
3. the right of persons who are not capable of understanding or following the proceedings to receive appropriate attention
4. the right to communicate, *inter alia*, with consular authorities in the case of foreign suspects,
5. the right to information.

The right to interpretation and translation of important documents, which is dealt with in chapter 2, regards all the stages of a proceeding, including meetings with the legal adviser. The text of the proposal determines expressly that the right to make use of the services of an interpreter free of charge also applies to persons with a hearing disorder or a speech defect. This means that this right also encompasses sign language interpretation. As regards the right to free translations, the draft determines that the responsible authority decides which documents have to be translated. However, the legal adviser of the suspect has the right to demand the translation of further documents (article 7, clause 2 of the draft).<sup>3</sup>

Additionally, the draft prescribes expressly the consultation of *sufficiently qualified* translators and interpreters. Article 9 of the draft also contains a real innovation in this field – the use of audio and video recordings in all proceedings in which translators and interpreters have to be called in. In case of dispute, the parties would receive a copy of the recording. Otherwise, the recording would only be used for checking whether the interpretation has been carried out correctly. The Commission has thus clearly advocated an up-to-date interpretation of article 6, paragraph 3 lit e ECHR (Convention for the Protection of Human Rights and Fundamental Freedoms), which, up to now, has not been enforced in the practice of criminal

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<sup>2</sup> Cf. COM(2003)75 final from 19 February 2003.

[http://eur-lex.europa.eu/LexUriServ/site/en/com/2003/com2003\\_0075en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2003/com2003_0075en01.pdf)

<sup>3</sup> For Austria and for Germany the issue of the amount of interpretations and translations is very relevant because Austria and Germany have already been convicted in this context before the European Court of Human Rights (case Kamasinski vs. Austria, verdict of the European Court of Human Rights from 19 December 1989; case Öztürk vs. Federal Republic of Germany, verdict of the European Court of Human Rights from 21 February 1984).

law in the EU member states. The recognition by the Commission that there is not a sufficient number of qualified court interpreters and translators for the various languages (parameter 37 of the explanatory memorandum) reflects everyday court experience in all member states. The Commission mentions in the explanatory memorandum its aim to search for solutions which would ensure that every member state had enough qualified translators and interpreters.

Court practice in Europe confirms the opinion of the Commission that there is not a sufficient number of qualified interpreters for several languages. Universities provide qualified training only for the more dominant languages and an extremely small number of other ones. In Austria, for example, there is no training at all for a number of languages that are very important in court. Thus, the list of sworn in and certified court interpreters contains people who are not at all or only insufficiently qualified for working with these languages. The situation is not very different in other member states. This needs to be remedied in two ways. First, as the Commission proposes, it has to be ensured that interpretations and translations are checked within the proceeding. Second, the training of court interpreters in Europe will have to be improved and standardized.

To sum up, one can say that the quality of interpretation and translation services and the training of interpreters and translators will have to be improved in the entire EU. This means that new educational facilities will have to be established in Europe in order to create common quality standards for court interpreters. The basis for such standards has already been established by three projects promoted by the EU.<sup>4</sup> After the first suggestions regarding the linguistic standards, the selection of students for training, models for the implementation and some training material for the legal professions were introduced (cf. Hertog 2001 and 2003; Keijzer-Lambooy & Gasille 2005). Now it is the responsibility of the individual member states to adjust and further develop these results as well as to implement their national training and follow-up training systems.

Today, many public institutions, NGOs and other private groups in Europe are trying to train people with knowledge of foreign languages to work in court. Because of the great number of languages required, training is held in the respective national languages. The single target languages can only partly be dealt with.

Inspired by the initiatives of the European Commission and in consideration of the future requirements, this paper presents a pilot training scheme for remedying this unsatisfactory situation and also investigates its didactic potential. Above all, it explores the question of whether it is possible to meet the increasing demand for qualified translators and interpreters by introducing alternative methods of training.

## 2 Presentation and evaluation of cross-language training

The Austrian Association of Court Interpreters has regularly organized entry preparation seminars in the field of court interpretation for prospective court interpreters since September 2002. The first seminar, held in September 2002, focused on an “Introduction to interpretation techniques”. The seminars aim at persons who have had no training in the field of translation and interpretation, but who have a very good command of two languages and want to apply for the *List of Sworn and Certified Court Interpreters*.<sup>5</sup>

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<sup>4</sup> Grotius projects 98/GR/131, Grotius project 2001/GRP/01, and Agis project JAI/2003/AGIS/048.

<sup>5</sup> Only those persons can be entered in the *List of Sworn and Certified Court Interpreters* who either have a university degree in translation or interpretation and two years experience in the field or those who have no such training but can prove that they have been translating or interpreting for at least five years. Only those who fulfill these requirements can take the examinations. If they pass the examination, they are entered in the List.

## 2.1 Target group

The two-day long “pilot seminar” held in September 2002 showed that there is enormous interest for this preparation course. The first course attracted even trained translators and interpreters, some of whom were already certified for court services. The reason why professional interpreters have been so interested is probably that interpretation studies at Austrian universities still do not place much emphasis on court interpreting. Seminars which took place later were attended by a mixture of people having a degree in translation or (more seldom) interpretation studies, in language studies or in law as well as persons with other professions who use their knowledge of foreign languages in their job and as interpreters for their families.<sup>6</sup> Thus, the participants of the individual seminars had different interests and expectations and formed very heterogeneous groups.

The data<sup>7</sup> presented in this work was obtained from the analysis of a total of nine seminars that took place during a period of two years (2002 until 2004). 132 people took part in the seminars. The seminars were held in German so that the individual working languages (altogether 27 languages) of the participants could only be taken into consideration to a limited extent. 21 people attended the “pilot seminar”. In the later seminars the average group size was 13. Of the 132 participants 116 (87,88%) were female and 16 (12,12%) were male.

An analysis of participants into those “having a translation or interpretation degree vs. those not having such a degree”, shows that among the 132 participants, 37 people (28%) had a degree and 95 people (72%) had no degree in translation or interpretation.

These results show how heterogeneous the groups were. Less than one third of the participants had a translation or interpretation degree.

During the seminar lessons I realized that, from a didactic point of view, the group could not be divided simply according to this criterion. It was much more fruitful to take the background knowledge of the participants into account. This made it possible to divide the participants according to their individual competences with relevance to court interpreting. Hence, it was best to distinguish between participants who possessed these competences vs. those not having relevant competences. In the analysis, translators, interpreters, philologists

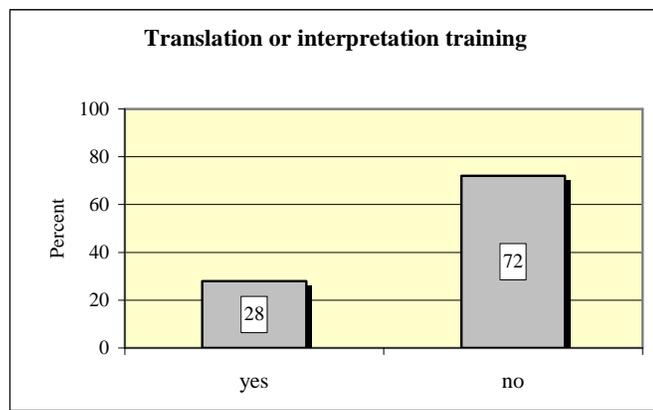


Diagram 1: Translation or interpretation training

<sup>6</sup> The participants of the courses had different jobs, e.g. priest, registrar, nurse, embassy secretary, bookkeeper, restaurant owner – to name only a few.

<sup>7</sup> I would like to thank Ira Stanic for checking the completeness and correctness of the analyzed figures.

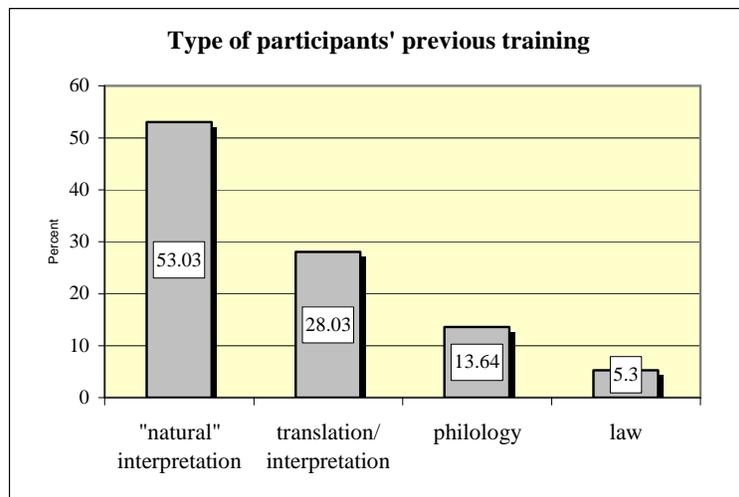


Diagram 2: Type of participants' previous training

and lawyers were classified as persons with existing competences in the field of court interpreting. They accounted for 47% of the participants, while those participants without competences relevant for court interpreting accounted for 53%.

Diagram 2 shows a comparison of the number of participants without relevant background knowledge and the number of those with background knowledge. The latter group is further divided into translators and interpreters, philologists and lawyers.

As regards the group of participants with a translation or interpretation degree, it was noticeable that translators outnumbered interpreters by far. They had excellent knowledge of their respective working languages as well as outstanding cultural and translation competences. However, they did not have a very high degree of competence in interpretation and were not very familiar with the legal system and terminology. Participants with a degree in language studies had excellent command of their respective foreign language as well as outstanding cultural competences, which are indispensable when working as a translator or interpreter. Some of them also had a fairly good degree of competence in translation. Lawyers had a very good command of their foreign languages, an excellent knowledge of the Austrian legal system as well as knowledge (as a rule contrastive) of the codes of procedure and legal terminology. Among the participants with no particular background knowledge, there were many with a very good command of their respective language, who worked as "natural" interpreters, above all in their families and at work. However, they did not name any training or practical experience which would be relevant for working court interpreters.

In addition to German as the common working language, the following 27 languages were represented in the seminars: Albanian, Arabic, Armenian, Bosnian/Croatian/Serbian, Bulgarian, Chinese, Danish, English, French, Finnish, Greek, Hindi, Hungarian, Italian, Japanese, Latvian, Lithuanian, Persian, Polish, Punjabi, Romanian, Russian, Spanish, Turkish, Czech, Ukrainian and Urdu.<sup>8</sup>

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<sup>8</sup> The information about training and working languages was taken from the application forms. In the questionnaire a question about the training and the working languages was left out deliberately. Otherwise it would have been easy to identify the participants. If they had not remained anonymous, the participants might have answered the questionnaire less freely.

## **2.2 Course contents**

In addition to the introduction to interpretation techniques, the two-day “pilot seminar” could only touch on some topics that are relevant for court interpreting and impart a degree of awareness regarding the complexity of the problems connected with court interpreting. In order to close this gap in training, two different types of seminar were later offered; the introduction to interpretation techniques was split into a “basic course” and an “advanced course”. According to their interests, the course participants could attend either both seminars or only one of the two. The aim of this division was, on the one hand, to be able to limit the subject areas more efficiently and, on the other, to make the rather heterogeneous groups of participants more homogeneous by grouping those participants together who had similar interests and background knowledge.

The two-day introduction course “Interpretation techniques: basic course” gave an overview of the court interpreters’ fields of work and the requirements connected with this work, as well as of the basic topics of translation. The following is an overview of the topics of the courses:

Topics included in the two-day basic course:

- Overview of the fields of work (court interpreting, police interpreting, asylum interpreting): requirements and competences
- Legal basis of court interpreting
- Principles of general communication
- Principles of institutional communication
- Professional conduct
- Note-taking – introduction
- Note-taking – exercise (German-German exercises)
- Introduction to whispered simultaneous interpreting

After putting the emphasis on the basic principles of court interpreting on the first day of the seminar, the aim of the second day was to introduce the participants to consecutive interpreting (with the use of note-taking) and whispered interpreting independently of their various working languages. The focus of attention was put on note-taking. In the course of the exercises the professional role of court interpreters was discussed, above all with regard to the power structure in the courtroom.

The two-day “advanced course” was partly based on the basic course, and partly had new contents.

Topics of the two-day advanced course:

- Introduction to document translation
- Translation exercises
- Sight translation
- Further lessons on note-taking with exercises
- Exercises and analysis of the work taking account of all the competences acquired during the seminar
- Mock trial presided over by a judge

Technical texts and topics formed the working basis of the “advanced course”. In the field of technical language, the emphasis was put on terms and abbreviations used in court practice. The participants were encouraged to work out a system which could be used in the various working languages. At this point, the respective foreign languages of the participants were also taken into account to some extent. The following aspects were trained, analysed and

discussed in particular detail: technical terminology and the expectations of the communication partners within the context of the different kinds of examination, language registers, working with defective texts or incomplete text contents, non-verbal communication, situational perspectives, explanations, role boundaries etc.

At the end of the seminar there was a mock trial presided over by a judge. This trial had a preset scenario based on authentic files. The seminar participants had the opportunity to practise the techniques that they had learned during the seminar in the form of role plays. This exercise was a particular challenge for the participants because they did not only practice all their newly acquired competences with each other but also tested them in a scenario that was very similar to an authentic trial. The cooperation of a real judge ensured a special dynamics, so that these exercises resembled authentic trials in almost every detail.

### **2.3 Evaluation of the seminars**

The objective of the evaluation of the seminars was to assess the usefulness and efficiency of cross-language courses in the field of interpreting. This assessment could not be carried out without questioning the participants about their evaluation of the competences they thought they had acquired individually. At first sight, it seemed that individual progress was made more difficult by the fact that the seminars had to satisfy different expectations and that they were held only in German, taking the specific working languages of the participants only partly into account. Hence, real monitoring of what had been learnt in the field of contrastive translation and interpretation was only possible in some individual cases.

After the two-day seminars, the participants were asked to fill in anonymous questionnaires. Questionnaires were handed out to all 132 participants and 130 were completed and returned. The objective of the evaluation of the questionnaires was to show whether the participants, with their different languages, had acquired new competences in the course of the seminar and whether they could use this knowledge in their jobs. It was also important to find out whether the participants thought they would be able to transfer this knowledge, acquired in German, to their individual working languages.

The following chapter contains the evaluation of those sections of the questionnaire that are relevant for finding out whether cross-language interpretation training is possible.

## **3 Responses and discussion of results**

In order to facilitate classification and evaluation, the questionnaire was divided into three question groups: ‘theory’, ‘exercises’ and ‘individual knowledge acquisition and framework conditions’. The “theoretical” part of the questionnaire included the contents and the discussion of the following subject areas: overview of the fields of work, an outline of document translation, an outline of note-taking and professional code of ethics. The “practical” part focused on questions about the exercises including: note-taking, sight translation, whispered simultaneous interpreting, interpreting in a mock trial. The third group of questions was dedicated to the individual knowledge acquisition during the seminar as well as the general set-up and the quality of the trainer’s coaching of the group. For reasons of space, only the answers regarding the seminar contents are dealt with here. The answers regarding the general set-up and the coaching by the trainer were all very positive, but their details are not necessarily relevant for the present discussion.

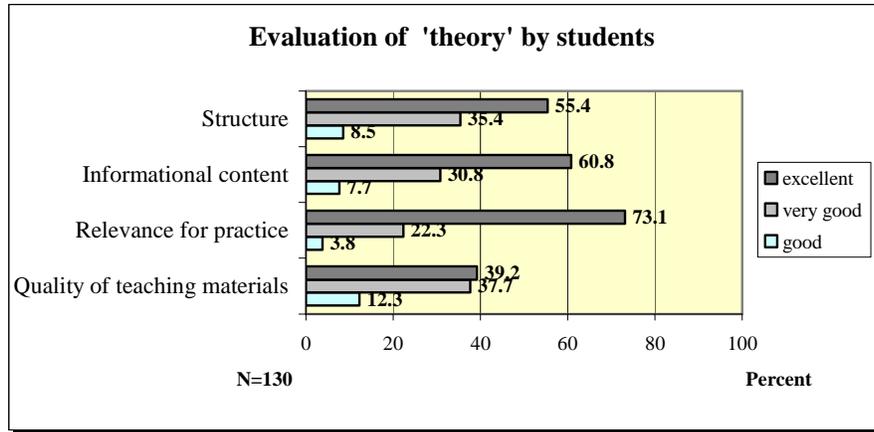


Diagram 3: Evaluation of 'theory' by students

### 3.1 Evaluation of the theoretical contents

As already mentioned, the assessment of the “theoretical” contents of the seminar includes all the topics on which the trainer had given lectures. In the following question the participants were asked to rate the quality of the theoretical part of the seminar according to the following grading scale: 1 = excellent, 2 = very good, 3 = good, 4 = satisfactory, 5 = not satisfactory. This question related to the criteria: structure, informational content, relevance for practice, quality of teaching materials.

The results of the evaluation show that the criteria ‘structure’, ‘informational content’ and ‘relevance for practice’ received very positive grades, while the assessment of the ‘teaching materials’ was not quite as good. The trainer used handouts, work sheets and documents in various languages and suggested sources for further reading. After the first seminars and analysing the first evaluations, the trainer changed and improved these materials and also replaced some material with new one. These measures achieved much better evaluations of the teaching materials in subsequent seminars. Tab. 1 shows that it was mostly the participants of the first three seminars who were somewhat unsatisfied with the quality of the teaching materials. In the later seminars the ratings were better.

Seminars	Teaching materials					Total
	Excellent	Very good	Good	Satisfactory	Not satisf.	
1	4	8	6	3	0	21
2	3	5	3	3	0	14
3	5	6	1	4	1	17
4	8	2	1	0	0	11
5	6	4	2	1	0	13
6	6	8	0	1	0	15
7	7	4	1	1	0	13
8	5	7	1	0	0	13
9	7	5	1	0	0	13
Total	51	49	16	13	1	130

Tab. 1: Quality of teaching materials

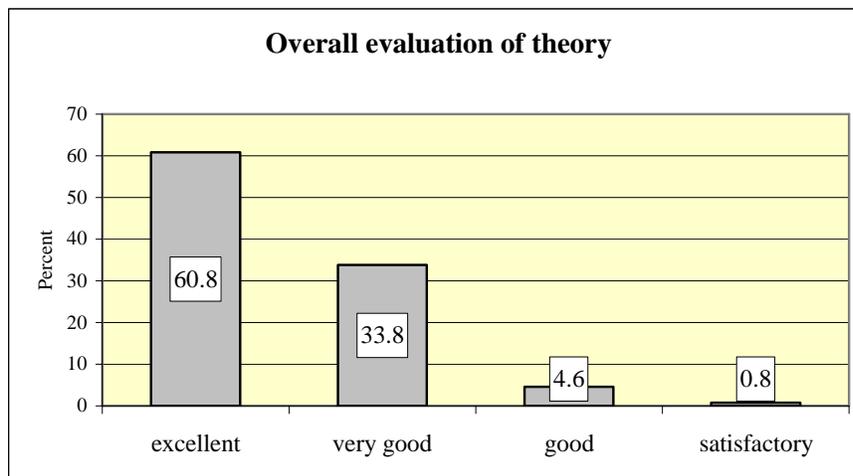


Diagram 4: Overall evaluation of theory

From a didactic point of view it is important to note that the choice of teaching materials for cross-language courses plays an important role and is a very difficult task. In order to satisfy the various interests of all the course participants, with their different educational backgrounds and experience,<sup>9</sup> special didactic competences and special experience on the part of the trainer are indispensable.

Diagram 4 shows the participants' evaluation of the entire "theory" section of the seminar according to the same scale as for the questions above:

### 3.2 Evaluation of the exercises

The question group about the "exercises" focuses on the applicability of the various techniques that were practised during the course, on the demands made on the participants and on the quality of cooperation among course participants. The opinions of the participants about the relevance of the exercises for their future career and the demands made on them are given below.

In the first question of this group, the course participants were asked to assess whether the contents of the exercises were, in their opinion, very important, relatively important or not important for working as a court interpreter. Another question asked the participants whether the demands made on them were too high, just right or too low. This question was important because of the differences in the participants' background knowledge. Its aim was to see whether the seminar succeeded in addressing the participants' individual needs and in making the appropriate individual demands on each participant. The next question dealt with the quality of the cooperation between the participants themselves. The evaluation of this question was very interesting given the heterogeneity of the group (different background knowledge, approaches and languages of the participants).

Diagrams 5, 6 and 7 show the results of the above listed questions:

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<sup>9</sup> The „natural“ interpreters often asked for ready-made solutions for the problems.

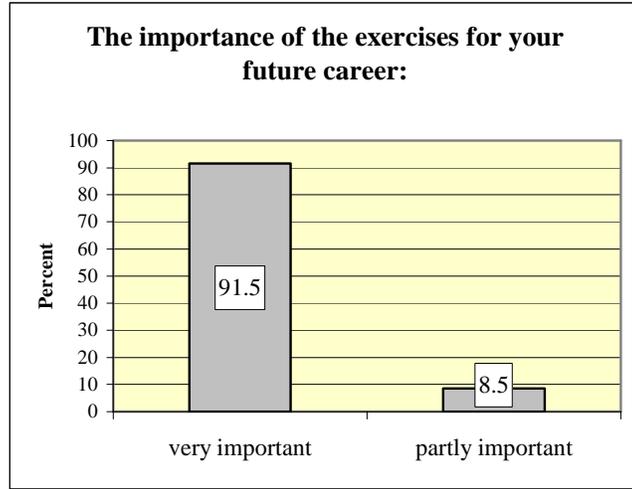


Diagram 5: Result of question 'The importance of the exercises for your future career'

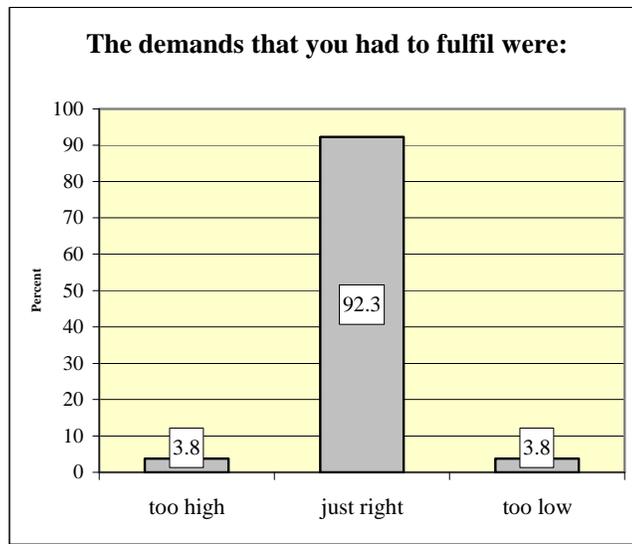


Diagram 6: Result of question 'The demands that you had to fulfill'

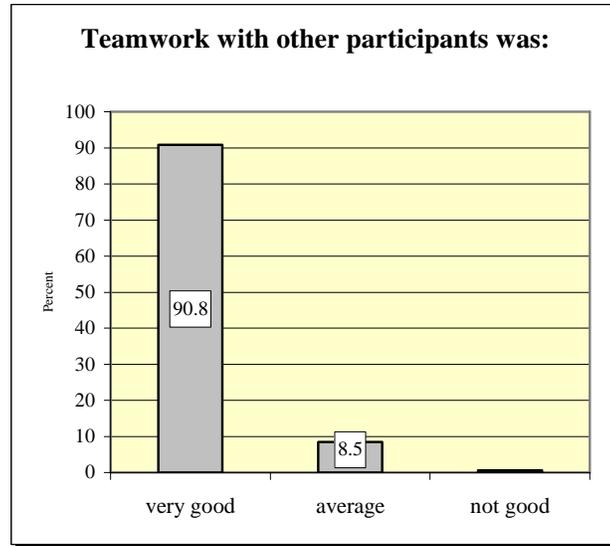


Diagram 7: Results of question 'Teamwork with other participants'

As in the “theoretical” part of the questionnaire, the last question of this part also asked the participants to give an overall evaluation of the exercises. The participants had to rate the exercises according to the following grading scale: 1 = excellent, 2 = very good, 3 = good, 4 = satisfactory, 5 = not satisfactory. Diagram 8 shows the results.

The comparison of the individual seminars shows that the course participants were somewhat less satisfied with the first two seminars not only regarding the theory but also with regard to the exercises. Tab. 2 shows the results of the analysis in detail. There are grounds for supposing that, in this case as well, the reason for this gradual improvement in the participants’ assessment is that, after having gained experience in the first seminars, the trainer could make appropriate improvements in the later seminars.

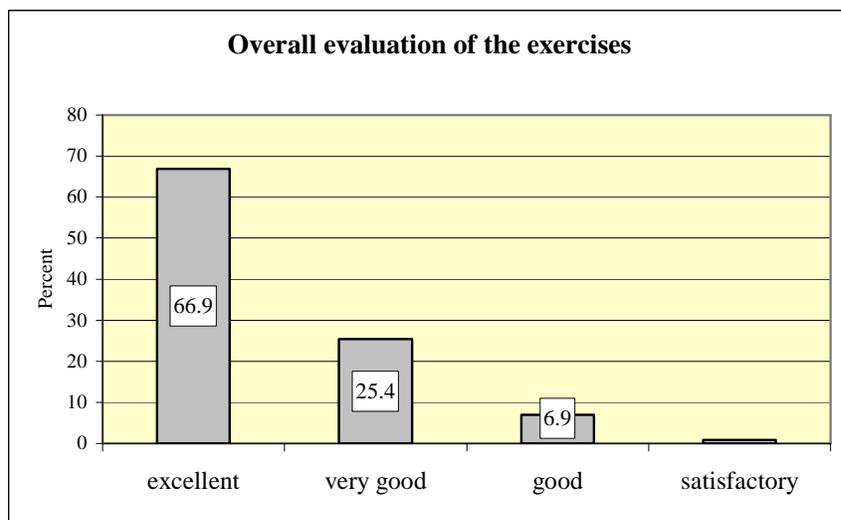


Diagram 8: Overall evaluation of the exercises

Seminars	Exercises – overall evaluation				Total
	Excellent	Very good	Good	Satisfactory	
1	6	11	3	1	21
2	9	4	1	0	14
3	13	4	0	0	17
4	11	0	0	0	11
5	9	2	2	0	13
6	12	2	1	0	15
7	11	2	0	0	13
8	7	5	1	0	13
9	9	3	1	0	13
Total	87	33	9	1	130

Tab. 2: Exercises – overall evaluation

The result of the analysis of the answers regarding the exercises is very satisfactory. However, the cross-language training of practical interpreting remains a largely unexplored area (with the exception of note-taking). The testing of different methods of teaching achieved very good results within this context, but for establishing universally applicable methods a broader approach, longer periods of observation and evaluations are necessary.

### 3.3 Personal gain in knowledge

The third section of the questionnaire was dedicated to the analysis of the participants' personal gain in knowledge. This part of the questionnaire is of crucial significance for the entire analysis. Its aim was to find out how much the participants had profited from the seminar and, above all, which new competences they had really acquired and how satisfied they had been with the framework conditions, the working atmosphere and the trainer. In addition they were asked whether the seminar had lived up to their expectations.

The first question of this section was: "How much did you profit from the seminar?" The question contained the following five points which the participants had to assess with the ratings 'great profit', 'some profit' and 'no profit':

- The knowledge acquired in the seminar
- The transfer competence acquired in the seminar
- The behavioural competence acquired in the seminar
- The self-confidence acquired in the seminar
- Interchange and discussion with colleagues

The aim of the question regarding the newly acquired knowledge was to find out whether the large group of participants who had no background knowledge regarding court interpreting had learned a lot about this new subject matter. In addition, the aim of the seminar was also to impart new knowledge to those participants who already had competences in this field.

As regards transfer competence, participants had to assess how much they had profited from the transfer techniques taught during the seminar. Did they acquire new verbal, para-verbal and non-verbal means of expression? This part of the seminar dealt above all with verbal means of expression and with rendering them with the help of mnemonic aids.

Behavioural competence is closely connected with transfer competence. The rendering of para-verbal and non-verbal expressions during communication can have a great influence on the communicative situation. The seminar placed special emphasis on unconsciously expressed signals, which also play a great role in communication. As regards the analysis of behavioural competence, the seminar also focused on how the role of interpreters is understood by those who need interpretation services.

The next point of the question on the competences acquired in the seminar deals with the professional self-confidence acquired during the seminar. Customers who employ professional interpreters often try to monopolize the interpreters during the communicative situation. The aim of the seminar was to teach the participants by means of various exercises that interpreters have to define their role themselves, taking into account the objective of both communicating parties.

As the course participants had very different backgrounds, the question whether they had profited from the interchange and discussion with each other was very interesting. The aim of the question was to see whether the potentially negative circumstances that the members of the groups were heterogeneous, and often very different regarding their working languages and professional background had a positive or negative effect on the progress of the seminar. These differences could actually have brought about a very productive interchange and constructive discussions among participants.

Diagram 9 shows the participants' answers in a summarized form.

67.7% of the participants claimed to have "greatly profited" from the acquired knowledge in the seminar and 32.3% to have "partly profited". Thus, around two thirds of the participants thought that they had profited very much from the knowledge that they had acquired during the seminar. If we take into account that some participants (above all those with a degree in translation or interpretation) were already familiar with some of the subject matter taught during the seminar, these results can be seen as very satisfactory.

The lectures on transfer competence (note-taking and the exercises) were monolingual, that is German into German. Exercises with the individual working language(s) of the participants could mostly be carried out only once during one entire seminar. Another subject

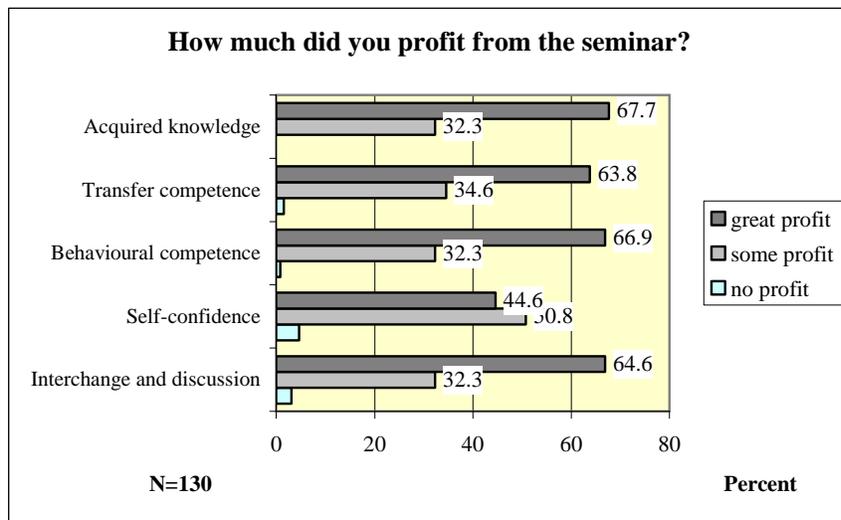


Diagram 9: Result of question 'How much did you profit from the seminar?'

matter of the lessons and the discussions was non-verbal means of communication like body-related means of expression and communication objects. 63.8% of the interviewees said that they had “greatly profited” from the newly acquired transfer competence. 34.6% had “partly profited” and two participants claimed not to have profited from this exercise.

The objectives regarding the role of interpreters are very different among communicating partners in public authorities, which on the one side are the parties and on the other the administrative representatives. Both sides expect the interpreters to be “loyal” to them in the sense that the interpreter should represent their individual objectives. Regarding this problem, we discussed and practiced situations during the seminar with the aim of dealing with the expectations of the communicating parties and their demands on the interpreters. In assessing the question on behavioural competence, 66.9% of the participants claimed to have “greatly profited”, 32.3% to have “partly profited” and one participant had ‘not profited’ from this part of the seminar.

44.6% out of the 130 participants who had filled in the questionnaire said they had “greatly profited” from their newly acquired self-confidence. A somewhat larger percentage of 50.8% of the participants claimed they had only “partly profited” and 4.6% thought that they had ‘not profited’ as regards this competence. As regards this issue of acquired self-confidence, it should be mentioned that during group discussions and exercises on the topic about the role, the tasks and the self-confidence of court interpreters, participants often had different opinions. Translators, interpreters, philologists and lawyers already had a specific image of this profession, while “natural” translators and interpreters were of the opinion that translating and interpreting was a service and that the client was the one who determined the tasks, the amount to be translated or interpreted and even the partiality towards one of the communicating parties. At the end of the discussions the “natural” translators and interpreters mostly admitted they had been quite unsure about this issue. Let us recall the distribution of participants according to their training: 47% of the participants were translators, interpreters, philologists or lawyers, while 53% were participants with a different educational background, who act as “natural” translators or interpreters. In analogy to these figures we could suppose that those 44.6% of course participants who had “greatly profited” from the self-confidence acquired during the seminar belonged to the group of ‘newcomers’. Those 50.8% who claimed to have only ‘partly profited’ or the 4.6% who had “not profited” at all could belong to the group of those participants who had already had training in the field of translation, interpretation, language studies or law.

64.6% of the participants had “greatly profited” from the interchange and discussion with their colleagues. 32.3% had “partly profited” and 3.1% had “not profited” at all. The overall evaluation of this point depended, of course, on how the groups were put together in the individual seminars. However, we can say that the course participants profited in the discussions from the heterogeneity of the groups.

The last question about the personal gain in knowledge is also of great importance for this study: “Can you apply the competences acquired in German during the seminar in your individual working language(s) without difficulty?” The participants could choose from three responses: “yes, very well”, “partly” and “not very well, because...”.

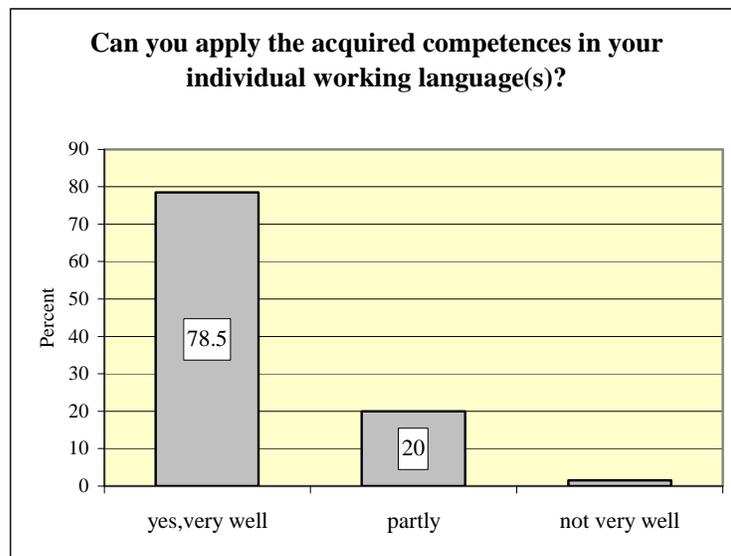


Diagram 10: Result of question 'Can you apply the acquired competences in your individual working language(s)?'

78.5% of the participants, which is the overwhelming majority, thought that they would be able to apply the acquired knowledge very well in their individual working language(s). 20% of the participants expected to be able to at least partly apply the new competences in their working language(s). Of course, these results have only a limited validity. The participants only recorded their personal view because most of them had no practical experience at the time they filled in the questionnaire. It would be very interesting to question the same group after a certain period as to whether they were really able to use the competences acquired during the seminar in actual practice. However, the impression of the participants immediately after the seminar is, of course, also important and shows very positive results.

## 4 Conclusions

To sum up we can say that the analysis of the questionnaires filled in by the 130 course participants allows the conclusion that successful cross-language training is indeed possible (cf. also Gertrud Hofer's description of similar projects in Switzerland). An assessment of whether cross-language teaching is more or less successful than language-specific teaching would require the organization of seminars for a specific language and the subsequent evaluation by means of the same questionnaire as used for this one.

The short seminars described above of course surely do not impart all the competences necessary for working as a court interpreter nor could they offer enough practice during their duration of only a few days. However, the main goal of these seminars was to make the participants aware of the complexity of court interpreting and encourage them to occupy themselves with this subject matter in the future as well. The aim of the seminars was also to motivate the participants to continue developing their competences. This means especially that, when participating in a communicative situation in a multi-lingual and multi-cultural environment, they should pay attention not only to linguistic but also to non-linguistic aspects of communication and act professionally and within the boundaries of their individual roles.

The examples from the study demonstrated that such alternative and cross-language training of court interpreting is not only possible but also very useful. There is evidence that many EU member states are already successfully organizing such training opportunities on a small scale. Unfortunately, we still lack the necessary networking among the various projects in this field. The Commission is in great need of qualified court interpreters and this demand could be met by cross-language training. This applies above all to the need for interpreters of languages of limited diffusion. There is already plenty of literature on the subject and a number of possibilities exist to build up networks as well as to introduce a more uniform training concept within the EU. It would be possible to work out a model which would take into account the minimum standards demanded by the Commission and encompasses the following issues: theoretical principles and problems of interpreting and legal translation, basic concepts of intercultural and trans-cultural communication, legal systems, language for special purposes and professional ethics as well as practice-oriented aspects like interpreting techniques and situational behaviour, note-taking and preliminary and introductory exercises for various working modes. This would also be very beneficial for the mobility and the cross-border work of translators and interpreters as well as trainers.<sup>10</sup>

The results of the three above-mentioned EU projects could form the basis for considerations about a common European framework of reference.<sup>11</sup> Such a framework of reference could encompass proficiency profiles and levels of competence for court interpreting and translating. Training courses in the respective majority or national language(s) could be offered in the various countries according to the profile established in this framework of reference. This would also bring a number of economic and practical advantages and more flexibility: students could complete parts of their training in various states and these courses would be counted for their studies at their home university; the cross-language training could, for example, be taken in the home country, the contrastive interpreting training, which involves active work in language pairs, in another country. The most important result of this would be a higher number of graduates as regards languages of limited diffusion that are only offered at a few locations. In addition, the urgent need for qualified interpreters would be met. The larger part of the language-independent training would be completed in the home country and the language-specific training at locations that concentrate on the respective language pairs.

The most important topics for a potential training framework for court interpreting have become apparent in recent years. What is still missing, however, is the unification of the overall framework as well as know-how concerning the didactic implementation of cross-language interpretation training. The training courses and methods which have already been tried and tested could well be put into practice on a larger scale. In order to achieve this, however, the exchange of experience and the elaboration of didactic methods are of crucial importance for developing concrete training measures. The coordination of basic training on a larger scale could also facilitate the adoption of standards for a recognized qualification. With a curriculum that would contribute to the fulfillment of the demands written down in the Green Paper we would indeed have a common European denominator.

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<sup>10</sup> The same approach could underlie a harmonized system of training for interpreter trainers: a standardized program for teacher training and preparatory courses for interpreter trainers could be developed and organized at a European level. For more information see Kadric, 2004.

<sup>11</sup> The Council of Europe, for example, has drawn up a Common European Framework of Reference for Languages to promote multilingualism in Europe. The Framework describes the competences necessary for communication, the related knowledge and skills and the situations and domains of communication.

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## Designing CAIT (Computer-Assisted Interpreter Training) Tools: *Black Box*

### Contents

- 1 Introduction
- 2 The interpreter training curriculum and learner autonomy
- 3 Developing a CAIT prototype tool: *Interpretations*
- 4 From *Interpretations* to *Black Box*
- 5 Conclusions: best practice and future developments
- 6 References

### Abstract

The paper discusses how a CAIT (Computer Assisted Interpreter Training) tool can be used to support the teaching and learning of interpreting, and outlines the main features of one such tool, *Black Box*. The interpreter training curriculum places strong emphasis on students' autonomous practice. Individual practice and group work are as important as class practice, and yet students do not always have access to suitable study support and training materials. After a short Introduction (1), the article begins with an overview of the interpreter training curriculum (2), with the aim of identifying those areas of the latter which could benefit from the support offered by an appropriate software tool. The concept of CAIT (Computer Assisted Interpreter Training) is briefly introduced in (3), in which the development and testing of a pioneering interpreter training prototype (*Interpretations*) is described. The encouraging response obtained during testing and demos has led to the development of a new, fully-fledged CAIT tool, *Black Box*, whose main features are presented and discussed in (4). Section 5 concludes the article by highlighting the main benefits of using such a tool and by outlining future development prospects.

### 1 Introduction

The present paper discusses how a CAIT (Computer Assisted Interpreter Training) tool can be integrated into traditional interpreting classes and outlines the main features of one such tool, *Black Box*. The article starts with an overview of the interpreter training curriculum (2) with the aim of identifying those areas of the latter which could benefit from the support offered by an appropriate software tool. Section 3 briefly introduces the concept of CAIT (Computer Assisted Interpreter Training) and describes the development of a pioneering interpreter training prototype (*Interpretations*). In section 4 the main features of the new, fully-fledged interpreter training tool *Black Box* are presented and thoroughly examined. Section 5 concludes the article by outlining the main benefits of using a CAIT tool and future development prospects.

## **2 The interpreter training curriculum and learner autonomy**

### **2.1 Curriculum structure**

The first interpreter training courses, established in the Fifties and Sixties, were essentially vocational training courses based on the teachers' professional experience:

“The people teaching in them [translator and interpreter training institutions] were often professional interpreters and translators; the profession itself had taken to setting its own standards and defining its own objectives” (Caminade & Pym 1998:282).

The creation of AIIC (International Association of Conference Interpreters) in 1953 greatly contributed to the setting of professional standards, including working conditions and professional ethics.

However, as regards the interpreting curriculum and interpreting pedagogy, the situation is less clearly defined. Indeed, conference interpreting is a relatively young academic discipline and although the literature on interpreting pedagogy and interpreter training exercises is now fairly abundant, there are very few published contributions on the overall structure and contents of the interpreter training curriculum. Nevertheless, there is widespread agreement on some basic principles, as shown by the AIIC recommendations on the criteria that must be met by interpreter training courses (Mackintosh 1995, 1999). In short, applicants to conference interpreting courses should have a university degree or equivalent and must pass an entrance exam, aimed at verifying their language skills, their ability to analyze texts, and their general knowledge. Students should be trained in both consecutive and simultaneous interpreting, and the course structure should reflect actual market demands, particularly as regards working language combinations. Professional ethics must be taught and interpreter trainers must be practising interpreters themselves. Finally, external examiners from international or national organizations should be present at the final examining sessions. Mackintosh concludes:

“Although there are differences in the approach to interpreter training, these seem small enough to justify the claim that there does in fact exist a training paradigm, derived from a widely recognized and practised interpreting paradigm” (Mackintosh 1995:129).

In another review of training programs, Renfer (1992) identifies four models of translator and interpreter training adopted all over the world: the two-tier system, in which interpreter training follows translator training; parallel training, in which students have to choose between translator and interpreter training at the beginning of the course; the Y-model, in which students choose between translator or interpreter training after a common trunk and postgraduate interpreter training.<sup>1</sup>

Whatever the type of training program, there does seem to be significant homogeneity in the curriculum model adopted around the world. However, until the comprehensive review carried out by Sawyer (2004), the only available publications were course profiles or discussions of the merits of specific training activities. To my knowledge, Sawyer is the only researcher to draw from educational theory and curriculum theory to develop a revised

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<sup>1</sup> A similar classification is suggested by Mackintosh (1999: 73).

curriculum (for the Graduate School of Translation and Interpretation of the Monterey Institute of International Studies). In his extremely interesting contribution, the author discusses a wide range of issues including admissions, training, final assessment procedures, and so on.

As regards the pedagogy of interpreting, the two leading schools of thought that have produced models of the interpreting process, namely the interpretive theory and the information processing approach, have also developed different pedagogical methods. Here, a very brief overview of the two training models is presented to justify the choices made during the development of *Interpretations*.

## 2.2 The interpretive theory and simultaneous interpreter training

The interpretive theory (or “Paris School”), developed by Seleskovitch and Lederer in the Seventies, postulates that after the interpreter has perceived the first source language (henceforth, SL) segment, the material is de-verbalized, that is, stripped of its linguistic form to retain only the sense, which is then re-formulated in the target language (henceforth, TL).<sup>2</sup> It follows that the main difficulty in interpreting is not finding TL equivalents, but resisting the interference caused by contact between the two languages and the temptation to transcode whole phrases without really understanding them.

In pedagogical terms, Seleskovitch and Lederer claim that the de-verbalization process is at the core of any type of interpreting, and that consequently teaching methods are not language-specific. The (more or less marked) syntactic differences between the two languages involved do not fundamentally affect the processes at work in interpreting. Finally, Seleskovitch claims that interpreting should always be taught from the foreign language (B) into the native language (A) because it is only in the mother tongue that students possess the necessary expressive abilities (Seleskovitch 1989:87).

The types of exercises suggested for simultaneous interpreter training are, among others, identifying key words in a text, summarizing a text in the booth, consecutive interpreting, interpreting narrative speeches (visualization techniques), and so on.

The interpretive theory has been very influential for over thirty years now and its training methods have been applied successfully on generations of interpreters. However, while the interpretive theory provides a simple model of text analysis and comprehension, it does not give students any suggestions of how to solve the problem of TL reformulation, as pointed out by Kalina (1994:253):

The advice frequently given to student interpreters to forget about the words and concentrate on the meaning is well-meant and may, to some extent, do for consecutive, but it definitely does not suffice for simultaneous interpreting. For in simultaneous, it is, among other factors, the incoming words on which the interpreter bases his assumptions, monitors them, decides on his production and checks it all over again.

Furthermore, the interpretive theory denies the existence of any specific language-pair difficulties. However, autonomy from SL structures can only be acquired over a period of time: a language-specific focus in the teaching of SI can facilitate the process. Similarly, although Seleskovitch and Lederer recognize that interference is common in SI,<sup>3</sup> no specific

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<sup>2</sup> “A mesure que l’interprète traduit, il oublie les mots qui ont été prononcés et ceux qu’il a dit lui-même, mais il retient les informations qu’il a comprises et réexprimées” (Seleskovitch and Lederer 1986:143).

<sup>3</sup> “La simultanéité des opérations d’audition et d’expression pousse à suivre les modèles phonétiques, morphologiques, sémantiques, syntaxiques de la langue étrangère. Chez l’interprète inexpérimenté, il s’ensuit

exercises or techniques are suggested to tackle this problem. Finally, Seleskovitch and Lederer's rejection of SI into the B language goes against market requirements in many countries: in other words, since many students will have no choice but offer interpreting into B as well as into A, specific training must be made available to them during their course of studies in order to best equip them for the task ahead.

### **2.3 The information processing approach and simultaneous interpreter training**

The information processing model of simultaneous interpreting breaks down the interpreting process into a number of subcomponents (Moser 1978). Simultaneous interpreting is seen as a complex activity requiring the concurrent use of several interdependent sub-skills. Therefore, the pedagogical methods developed on this basis aim to develop the skills needed to perform each operation. Training must be gradual

“... by progressing from easy to more difficult, isolating problems and focusing on variables one at a time and, at a later stage, combining them into progressively more intricate structures” (Kurz 1992:245).

Interpreter training courses that follow this approach begin with a preparatory phase in which a variety of exercises and drills are used to enable trainees to develop the skills needed to interpret. There are several examples of sets of exercises developed on this basis, including Moser's own set (Moser 1978), Lambert's cognitive method (Lambert 1989), Van Dam's strategies for simultaneous interpretation (Van Dam 1989), Kalina's preparatory exercises (Kalina 1992), and many more. Although there are some differences among the various methods, they all include a number of monolingual and bilingual exercises. All the supporters of the information processing approach agree that specific training is needed to cope with simultaneous listening and speaking and to manage the time lag between SL and TL speeches. Moser, Kalina and Lambert include variations of the shadowing task among their preparatory exercises. Likewise, Lambert, Van Dam and Kalina suggest different versions of the cloze drill aimed at developing anticipation skills. Exercises to develop students' linguistic flexibility and to teach repair techniques to be used when working under pressure (such as sight translation, abstracting, and paraphrasing, among others) are included in all the exercise sets.

In short, there is widespread agreement among the supporters of the information processing approach on the usefulness of paraphrasing, clozing, and sight translation, while there is still some controversy over the usefulness of shadowing, which is still one of the main controversial points in interpreting pedagogy (Déjean Le Féal 1997; Kurz 1992; Lambert 1992; and Schweda Nicholson 1990).

### **2.4 Simultaneous interpreting and autonomous learning**

To summarize this brief overview of interpreter pedagogy, it could be said that, despite the differences among the many interpreter training institutions, a common feature to all the courses is their intensive nature. They usually involve a high number of contact hours, complemented by an even higher number of self-study hours during which students are expected to practise. A recent example is the *European Masters in Conference Interpreting*

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non seulement des calques occasionnels mais un psittacisme généralisé [...]” (Seleskovitch and Lederer 1986:149).

(EMCI), a postgraduate degree offered by a number of European universities that have agreed on a common curriculum. The latter includes five core components (theory of interpretation, practice of interpretation, consecutive interpretation, simultaneous interpretation, the EU and international organizations) and a number of optional modules (EMCI 2005; Mackintosh 1999). Participating institutions have explicitly recognized the important role played by individual study activities within the degree course (EMCI 2005):

The program will normally offer no fewer than 400 class contact hours, of which a minimum of 75% will be devoted to interpreting practice. In addition, students will be expected to devote time to group practice of simultaneous and consecutive interpreting and other self-directed learning (i.e. background reading; use of information sources e.g. radio, TV, Internet; preparation of glossaries etc). The program is based on the expectation that the number of class contact hours, group work hours and self-directed study may total no less than 1,000 hours.

In other universities outside the EMCI consortium, credits and attendance requirements may vary, but the expectation that trainees will engage in assiduous individual and group practice is always present.<sup>4</sup> It must be noted that in most cases these self-study hours are unstructured and unmonitored, although recordings or handouts for practice sessions are sometimes selected by trainers. Whenever training materials are not made available by teachers, students are expected to find suitable speeches in the faculty video/audio library, on the Internet, radio, TV, and so on. Although students certainly need to develop good information searching skills for their future careers, they may not always be the best judges of what is suitable for their particular training stage (Sandrelli 2002a, 2002b, 2003b). Moreover, whilst advanced students may reasonably be expected to work autonomously during their self-study hours, beginners are at risk of picking up incorrect habits which may be difficult to eradicate later on (Déjean Le Féal 1997).

Furthermore, if unsupervised practice sessions are to be useful, students need to be able to assess their own performance and identify their weaknesses. Indeed, the development of self-assessment skills is an essential component of interpreter training. Most interpreting classes include a feedback session, during which trainees' performances are assessed by the trainer and/or peers. Trainees are often asked to carry out a self-evaluation as well. Depending on the course structure and trainer's class plan, the feedback session may include one or more of the following: teacher assessment, peer assessment, co-assessment (teacher and students together), and self-assessment.

Another common component to many interpreter training courses is tutor demonstration (Altman 1989): the trainer's performance is presented as a model of expected quality standards. In other words, students are expected to be able to identify the features which make the trainer's performance a high-quality one, and then try and follow his or her example.

Despite the interest in evaluation and quality in professional interpreting, attested by the relatively high number of publications in recent years and the compilation of a specific bibliography on the issue by Shlesinger (2000), very little research has been carried out on evaluation and assessment in training, as pointed out by Mackintosh (1995:126). A number of assessment grids have been developed in interpreter training institutions for use in class (see for example Schjoldager 1996 and Riccardi 2003), and an interesting study on assessment practices was recently carried out by Hartley et al. (2003). Their aim was "...to facilitate learner autonomy in trainee interpreters by providing them with explicit and detailed guidelines for peer- and self-evaluation" (Hartley et al. 2003:2). After an extensive review of

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<sup>4</sup> For example, in an outline of the two-year interpreting course offered at ESIT in Paris, Seleskovitch and Lederer (1986:166) specify that for every hour of class attendance, three hours of individual practice are expected if students are to achieve satisfactory results.

the available literature, an assessment grid was compiled for subjects to use in assessing a number of interpreting performances. Trainees, trainers, professional interpreters and users were involved in the study, which revealed that the ability to assess and describe quality interpreting evolves with training. In particular, there is huge variation in students' understanding of some attributes commonly used to evaluate an interpreting performance, including, for example, accuracy and fluency. In other words, to improve their self-assessment skills, students, and particularly trainees, need extensive guidance, preferably through co-assessment exercises carried out in class.

This brief analysis has shown that the structure of most interpreter training courses relies heavily on autonomous learning, which makes interpreter training a prime candidate for the development of dedicated computer software. In this sense, CAIT (Computer Assisted Interpreter Training) tools should be seen as a useful integration to traditional methods, not as a replacement of interpreting classes. However, the implementation of such software tools will require a shift in the educational approach. As this brief description of interpreter training has highlighted, the latter is very trainer-centered. Hartley et al. (2003:2) neatly summarize the situation as follows:

Currently, many if not most interpreter training programs still apply a trainer-centered approach where expert-trainers, as the source of expertise and authority, play the major role in judging and assessing trainee interpreters' performance. However, the acquisition of interpreting skills by trainees requires not only professional guidance during classes, but also extensive practice outside these hours [...]. In reality, therefore, trainee conference interpreters rely heavily on group practice and feedback from peers – targeting both language proficiency and communicative competence – to advance their interpreting skills and performance.

The following section 3 outlines how the *Interpretations* project aimed to address these concerns.

### **3 Developing a CAIT prototype tool: *Interpretations***

#### **3.1 Basic overview of the project**

*Interpretations* was the practical output of a doctoral research project carried out at the University of Hull (UK) between 1999 and 2002 with financial support from the European Commission under the Marie Curie Training and Mobility of Researchers Program.<sup>5</sup> The software was developed in cooperation with Jim Hawkins, an experienced computer program who had already been commissioned to undertake software development work by the University in connection with other projects. As was mentioned in (2), the basic idea was to investigate how to exploit the potential offered by computer technology to complement teaching methods traditionally used in interpreter training, along the lines of what was being done through Computer Assisted Language Learning (CALL) for foreign language teaching and learning.

The University of Hull was at the time the headquarters of the EUROCALL association and lead site for the TELL Consortium,<sup>6</sup> which had produced the only existing computer

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<sup>5</sup> EU contract number ERBFMBICT983512.

<sup>6</sup> The C & IT Centre for Modern Languages (formerly CTI Centre for Modern Languages) of the University of Hull used to host EUROCALL, the European Association for Computer Assisted Language Learning, and the

package for the teaching of liaison interpreting (Italian-English), namely *Interpr-It* (Cervato and de Ferra 1995). The original idea was to produce two CD-ROMs with training materials in Italian and in Spanish aimed at English-speaking trainee interpreters. However, a review of the available CALL literature and a close study of the many CALL packages available in the EUROCALL library soon revealed that the development of an authoring tool would be much more useful, i.e. a multimedia environment in which training materials could be created for any language combination on the basis of the resources available to teachers.

Before *Interpretations* could be developed, however, the interpreter training literature was also studied very carefully in order to identify the most commonly-used exercises and activities in interpreter training which should be supported by the CAIT tool. Since the project was aimed at developing a prototype to verify whether Computer Assisted Interpreter Training was both viable and desirable, it was decided to target a specific user group with specific needs, to facilitate both software development and testing. It was assumed that the potential users of *Interpretations* would be beginners in simultaneous interpreting who had already received training in consecutive interpreting. Therefore, they could be expected to be able to identify key concepts in a text, summarize it, and interpret it consecutively into the target language.

The rationale for this choice was that only those exercises aimed at developing the specific skills required for simultaneous interpreting would be included in the program. However, exercise selection was made difficult by the controversies in simultaneous interpreting pedagogy mentioned in section 2. In the end, the overall prototype design reflected more closely the information processing approach (see 2.3), in that tasks were selected in order to isolate and develop those sub-skills deemed to be necessary in simultaneous interpreting, such as simultaneous listening and speaking, anticipation, linguistic flexibility, and so on. However, it should be stressed that the program does not impose any specific pedagogical methods, in that as an authoring tool, it enables teachers to combine audio, video and textual resources to create exercises tailored to their students' needs. The prototype includes functions to create the following types of exercises: shadowing and clozing, paraphrasing, sight translation and simultaneous interpreting, and simultaneous interpreting with text. However, no rigid modular structure is imposed, so that teachers who do not like paraphrasing exercises, for example, may well choose to create simultaneous interpreting exercises only. A detailed discussion of the merits of the individual tasks, as well as pictures of the user interface, can be found in Sandrelli (2002a, 2002b, 2003a and 2003b). What follows is a brief description of the interface.

### **3.2 *Interpretations* user interface and authoring functions**

In *Interpretations*, teaching materials are organized in a tree structure comprising three levels, courses, modules and exercises: for example, Simultaneous Interpreting from English into Italian is a course, Sight translation is a module, and the specific pedagogical material prepared by the teacher for a sight translation is an exercise.

Authoring functions are only accessible to teachers, who can combine video, audio, and text (in digital form) to create exercises. Long video and audio recordings can be broken down into several sections by using a specific editing device to create different exercises, a feature that is particularly useful to adapt authentic conference materials to the students' level of expertise. However, if conference recordings are unavailable or unsuitable, teachers can record a speech easily through the authoring interface. Similarly, if they so wish, teachers can

provide a recording of their own interpreted rendition, to give students a demonstration (see 2.4), and a written translation of the SL text may also be included.

Since the program is meant to be primarily a practice support tool for the students' self-study hours, teachers can add instructions and information about each speaker and speech. All written texts can be annotated by means of a dedicated word processor called *Sandie*, which makes it possible to create up to five different categories of notes, e.g. grammar, vocabulary, cultural references, terminology, and so on.

The shadowing and clozing exercise combines the repetition of a spoken text in the booth with an oral fill-in-the-gap task. By shadowing (i.e. repeating word for word) the text, students get used to overcoming the physical difficulty of simultaneous listening and speaking; however, in order to fill the gaps, they must also understand the meaning of the speech. This modification of the shadowing task makes it suitable for interpreter training by addressing the often-raised objection that shadowing is harmful, exemplified by Dejean Le Féal's following comment (1997:617): "... since it is perfectly possible to shadow a speaker without even attempting to understand what he is trying to get at, shadowing may indeed lead students to commit the worst possible methodological error in SI: mindless parroting".

Paraphrasing is another monolingual exercise that was included in the design of *Interpretations* to enhance students' linguistic flexibility, a necessary skill in both their native and foreign languages. Indeed, research has shown that the ability to paraphrase can be considered an indication of aptitude for interpreting, so much so that paraphrasing tasks are being used in aptitude tests for entrance examinations in some institutions (Russo and Pippa 2004).

The sight translation exercise is included in the program both as a preparatory exercise for simultaneous interpreting and as a technique of its own which students must master in order to meet market demands. It is available in two different modes, traditional and timed sight translation, in which the text scrolls up according to a pace established by the teacher, so as to simulate the time pressure under which simultaneous interpreters work.

Finally, simultaneous interpreting exercises, with and without written transcripts of speeches, are included, in order to give teachers the tools to create different kinds of interpreting assignments.

When students log on to the program, *Interpretations* creates a user folder where all of their work can be saved for future reference. When tackling any exercise, students can record themselves and save the recording as an audio file. Students can watch video clips or play audio clips, and display any available written texts at the same time. The program is also equipped with a dedicated device (pitch tracker) which generates a graph representing the variations in the student's voice pitch during the performance. The tool enables students to monitor the prosodic aspects of their performance, including intonation and pauses.

### **3.3 *Interpretations* evaluation**

When the program reached a satisfactory development stage, software evaluation sessions were organized in collaboration with the Schools for Interpreters and Translators of the Universities of Trieste and Bologna (Forlì). A full description of testing procedures and results, including the software evaluation questionnaire used, can be found in Sandrelli (2003b). This section presents only a brief overview of the main points which emerged from the evaluation.

Overall, 37 students took part in the evaluation. After each session, students were asked to fill in a questionnaire, and were given a five-minute interview on various aspects of interface design, ease of use, available tools, etc. Students indicated the following features as the key assets of *Interpretations*: gradual introduction to simultaneous interpreting through

preparatory exercises, autonomous learning, individual feedback, and simulation of professional working conditions. Most students declared that the availability of video, audio and text helped them concentrate on content and aided comprehension. Students also highlighted that working with the software is less time-consuming than traditional work in the booth, since all the necessary materials and tools are organized and ready to be used in a dedicated environment.

The students of both universities also gave suggestions for improvement. Most comments centered on the need to increase the degree of interactivity between users and software and the quantity of information available to users. The latter aspect is worth highlighting: when creating exercises for the self-study hours, interpreting teachers need to bear in mind that students need access to more information than is generally considered necessary, precisely because the teacher is not there to help and answer questions. For example, students suggested that teachers should include a teacher's demonstration in all the exercises; a teaching guide in the Help menu explaining in detail the aims of each activity; background information about topics and speakers; and text analysis exercises centered on the speeches, for students to do at home and then submit to the teacher for feedback.

In 2001 and 2002 *Interpretations* was demonstrated in several interpreter training institutions, including Lessius Hogeschool (Antwerp), the universities of Leeds, Sussex, Westminster, Granada, Prague, Copenhagen, Aarhus and Paris. Other useful indications emerged regarding a number of desirable additional features, including functions for creating consecutive and liaison interpreting exercises; communication tools for sending and sharing files and obtaining feedback; a dedicated text editor for glossary work and other written work; video subtitling functions, both as an additional training aid and to develop specific professional skills.

The positive response obtained during testing and in conferences and workshops convinced us that CAIT is indeed both viable and necessary. Therefore, we decided to continue working in this direction. Section 4 describes the main feature of a new, fully-fledged CAIT tool which has been developed in collaboration with Melissi Multimedia Ltd. and is now available on the market.

## **4 From *Interpretations* to *Black Box***

### **4.1 The Melissi Digital Classroom<sup>7</sup>**

In 2002 Melissi Multimedia Ltd (U.K.) was set up to design and manufacture a revolutionary new digital language laboratory for the University of Hull, the *Melissi Digital Classroom*. It was decided that, as well as many functions for creating and distributing language-learning exercises, it would include a dedicated interpreter training module, called *Black Box*.

The digital classroom runs on a local area network (LAN), which means that the language teacher's computer is connected to the students' computers. This makes it possible to create and distribute language-learning materials to students (the whole class or groups of students) very fast across the local network. The authoring system enables teachers to record satellite TV and radio broadcasts and digitize VHS and audio tapes very easily, to produce exercises rapidly and efficiently. As well as traditional language learning activities (involving any combination of audio, video and text), teachers can use an integrated subtitling package and the interpreter training module *Black Box*.

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<sup>7</sup> Web address: [www.melissi.co.uk](http://www.melissi.co.uk)

Through the interface teachers have control over the work done by all the students who are logged on to the system. The list of logged-on users appears on the left hand-side of the screen and the teacher can select all of them, groups of them, or individual users to send them materials to work on. The teacher can listen in to what students are doing at all times thanks to the voice-message system, symbolized by the mobile phone icon; he or she can also give individual, personalized feedback without stopping the rest of the class via the same system. There is also a text-based message system (“chat”), which enables teachers and students to communicate in writing in real time.

The system also features an integrated word processor, a Web browser, a file compression and storage system, and the *Melissi Wave Viewer*, which is an advanced version of the Pitch Tracker tool available in *Interpretations* (see §3.2).

The digital classroom is proving very popular with universities in the UK, where it was developed.<sup>8</sup> Given the amount of interest that was expressed for *Interpretations* and for the *Black Box* module by language departments and interpreter training departments, Melissi Multimedia Ltd. decided to develop *Black Box* as a stand-alone program as well. *Black Box* was released in March 2005 and includes dedicated authoring functions to create simultaneous, consecutive and liaison interpreting exercises, as well as sight translation exercises, and several new and improved user functions.

## 4.2 *Black Box* authoring functions

The *Black Box* authoring system includes all the features of *Interpretations* in a more streamlined form, as well as a more sophisticated text editor for annotating texts, and a wide range of additional tools which will be briefly described in the present section.

In *Black Box* teaching materials are organized on two levels, Modules and Exercises (the Course level that existed in *Interpretations* was deemed redundant and was therefore dropped). Teachers prepare teaching materials through the *Exercise Wizard*, that can be seen in Fig. 1.

After selecting the “new exercise” option, teachers are asked to choose from among three pre-defined exercise types, i.e. simultaneous interpreting with audio or video, timed text

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<sup>8</sup> A list of selected current customers includes the universities of Hull (2 classrooms), Portsmouth (4 classrooms), Southampton, Middlesex, and Bath, as well as higher education colleges, including Regent’s College, Landau Forte College, Prior Pursglove 6th Form College and Stockton 6th Form College, and some UK government departments.

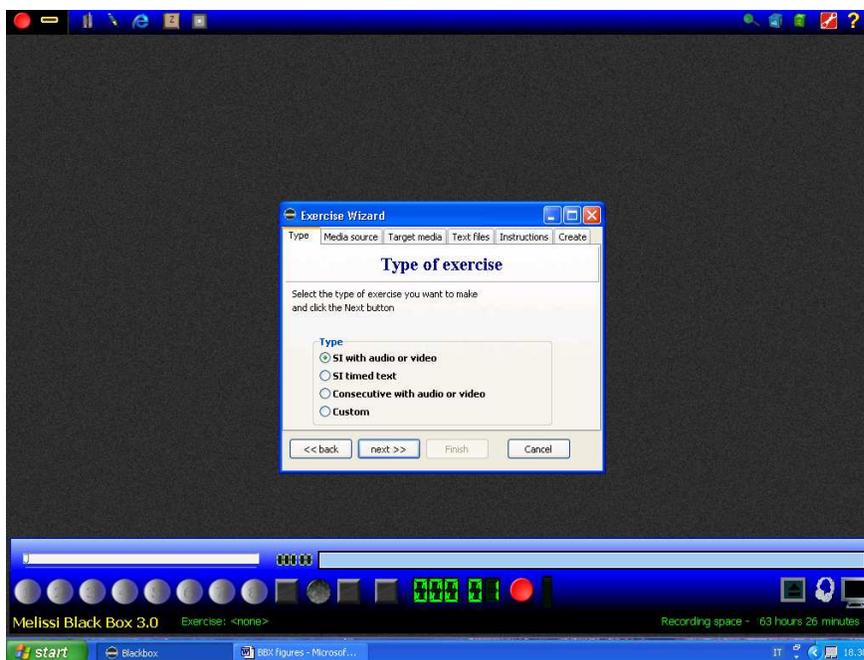


Fig. 1: Exercise Wizard

(sight translation), and consecutive/liaison interpreting. There is also a “custom” option to enable teachers to create other types of activities. If, on the other hand, teachers want to replicate the structure of a particular exercise to create a series of similar activities, they can select the “existing exercise layout file” option to speed up the process.

After choosing the exercise type, the program requires teachers to indicate the resources they want to include in each exercise, that is, media files (audio and/or video clips) and written materials. Clearly, in a simultaneous interpreting exercise the only essential elements are a video or audio clip and a transcript of the speech. However, the *Wizard* makes it possible to add many more resources, including instructions to students, a written translation of the speech, written exercises (e.g. comprehension questions, text analysis exercises, language enhancement activities, etc.), a teacher’s interpreted version of the speech (an audio recording), and so on.<sup>9</sup>

Moreover, teachers can select specific fragments from a source clip by applying the dedicated entry points (“set mark in” and “set mark out” buttons). This is a useful function to break up a long speech into several clips, without having to physically edit the recording with an audio/video editing software program: when the system reads the entry points, it loads only the specified part of the video or audio clip in the exercise. Teachers can also manipulate the sound stream by adding an echo effect and/or a sound distortion, in order to simulate realistic working conditions, which, as is well-known, are not always perfect.<sup>10</sup>

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<sup>9</sup> The presence of additional resources (written texts or recordings) is indicated by special icons which appear in the top part of the screen.

<sup>10</sup> Reference is here made to consecutive and liaison interpreting in particular, as these two techniques are often used in noisy environments. However, poor-quality equipment may be found in simultaneous interpreting as well, particularly when working as a freelance on national interpreting markets. Therefore, interpreter training should reflect these less-than-ideal working conditions as well to prepare students to work under difficult conditions.

Even the “basic” form of a simultaneous interpreting exercise can be enriched by annotating the source text transcript by means of a dedicated text editor, which is a more sophisticated version of *Sandie*, the editor available in *Interpretations* (see 3.2). The *Black Box Text Editor* has all the standard features of word processor and a few special functions (see Fig. 2).

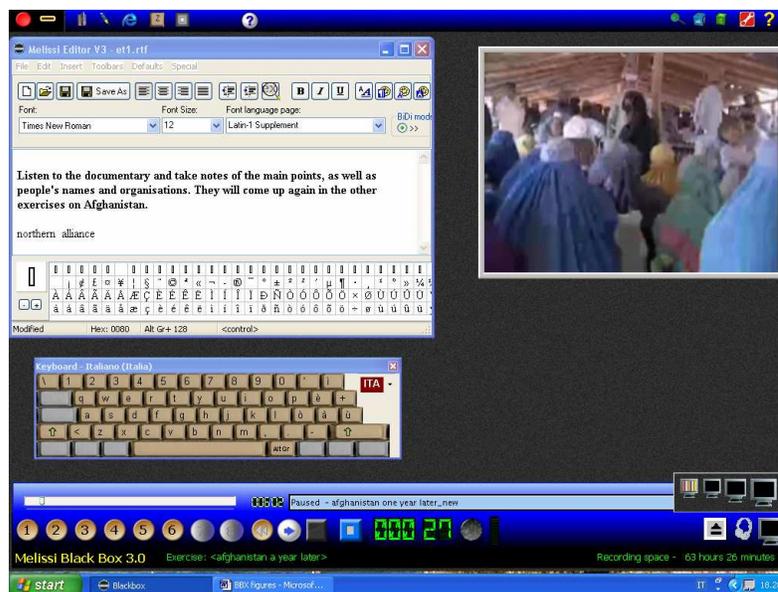


Fig. 2: Black Box Editor and on-screen keyboard

The *Black Box Editor* makes it possible to create Smart Text, by selecting a word or a phrase and inserting a “hot footnote” by clicking on a dedicated button. When students read the text, they will be able to see the note made by the teacher simply by moving the mouse pointer over the “hot” word. Six categories of notes are available, and the labels for these categories are chosen by teachers: for example, grammar, cultural reference, technical terms, and so on. Web links can also be inserted into the text, and can be clicked on to launch Internet Explorer directly. The different categories of notes are displayed in different colors and can be switched on and off by students when they are reading the text.

The Editor is also used by students to carry out written work. When teachers associate a language-enhancement exercise to an interpreting exercise, the written task is automatically loaded in the Editor. When students click on the Editor icon, the written exercise is opened automatically by the program. For languages with special characters, as well as the character map to be found in the Editor, *Black Box* features an on-screen keyboard which can be displayed, moved and re-sized (see Fig. 2).

The Editor can also be used to make bitmaps for timed sight translation exercises (created by using the *Exercise Wizard*, like all other exercises). A Rich Text Format file is loaded in the Editor and the background texture is chosen for the bitmap from among a number of choices. Then, teachers open the *Exercise Wizard*, select the bitmap as the source file for a scrolling text exercise and specify the time in which students will have to translate the text on-sight, as well as the amount of context (i.e. lines of text) that will be displayed. Text is presented to students in a scrolling cylinder which advances at the pace established by

the teacher (see Fig. 3). The text can be made to scroll upwards or downwards (for sight translation exercises which start from the end of the text).

All the files making up an exercise are bound in one individual file with a “.bbx2” extension, which means that it is impossible for the teacher to forget important materials (i.e.



Fig. 3: A sight translation exercise: scrolling text

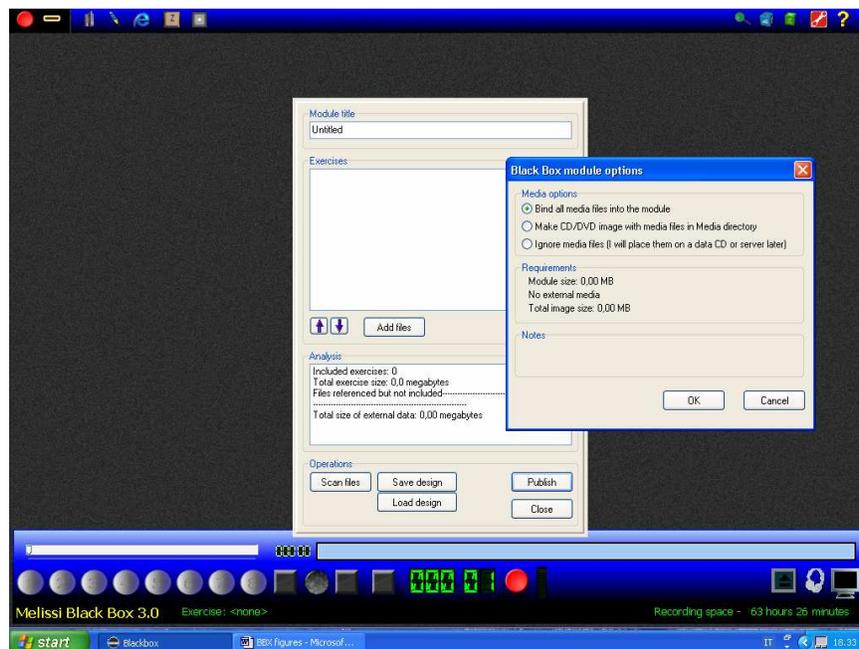


Fig. 4: Module maker

a video clip or a fill-in-the-gaps exercise) at home. Moreover, when a number of exercises have been created, they can be bound into one module, thanks to the Module maker (Fig. 4).

Exercises are selected and added to the module list in which they will appear in the order students should tackle them. The order can be modified before the module is published by using the dedicated arrows, and module design can be saved for future use. When the module is ready, it can be published in three different ways, depending on storage space available and intended use of the materials: all the media files can be included in the module; a CD or DVD image can be produced with all the media files stored in the *Black Box*' media directory; or the media files can be left out altogether. Thus, if *Black Box* is installed on a LAN, teaching materials can be stored in a dedicated directory where students will find it; or, if it is more convenient, they can be distributed to students on CD-Rom or DVD.

### 4.3 *Black Box* student user features

After describing the authoring functions available in *Black Box*, let us have a look at the user interface. Firstly, it must be noted that the system is fully icon-based, which makes it easy and intuitive to use and, incidentally, easy to localize as well (see Fig. 5).<sup>11</sup>

The interface is clutter-free, with all the icons arranged along the top and bottom of the screen. In the top left hand-side corner there are five icons. The books icon is the Open files option, enabling students to browse at available exercises, modules, projects, recordings and media. Student recordings can be compressed extremely quickly for storage on pen-drives or floppies.<sup>12</sup>

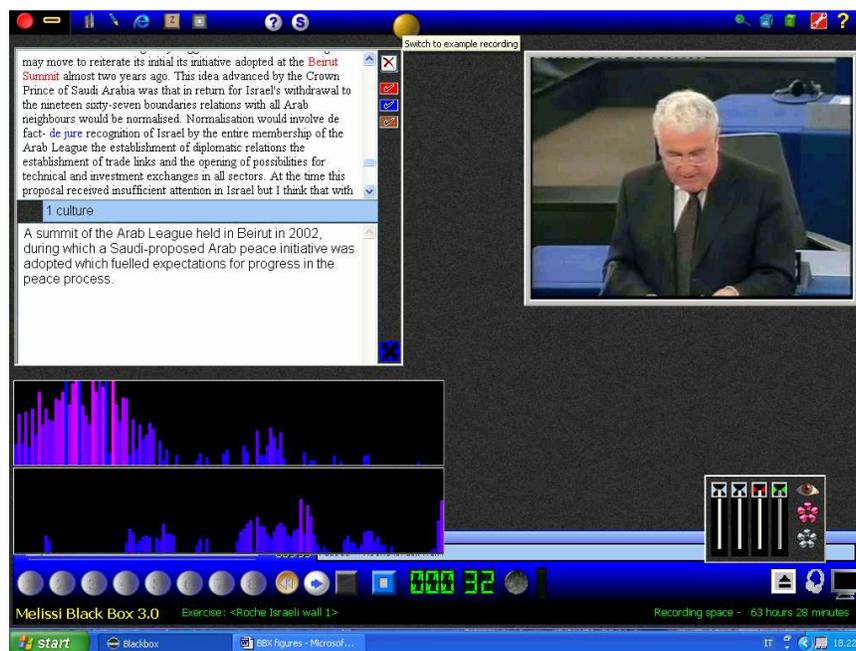


Fig. 5: *User interface: a simultaneous interpreting exercise, with annotated SL transcript, video clip window, SL speaker's and student's waveforms (top and bottom halves of the Melissi Wave Viewer, respectively).*

<sup>11</sup> Indeed, there are plans produce localized versions in a number of languages, since the only materials that need to be translated are the help guides and the various icons and buttons.

<sup>12</sup> *Black Box* uses the Ogg Vorbis "open source" technology, which makes files approximately 10 times smaller.

The pencil icon is *Black Box* Editor, which, as was extensively explained in (4.2), can be used to carry out written work, from language exercises to glossary preparation. Next to it are the web browser icon, the on-screen keyboard icon (see 4.2) and the module contents icon, which displays all the exercises available in a module.

The top right hand-side corner features another five icons. The green ball is the icon indicating *Black Box*'s additional plug-ins, that is, some extra functions that can be added to customize the program.<sup>13</sup> The two cubes to its right are the *Exercise Wizard* and the Module maker (see 4.2). The spanner icon is the audio mixer to alter default audio settings, whereas the question mark activates the help file, which includes a general *Black Box* guide (aimed primarily at students) and an authoring guide for teachers.

Along the bottom of the screen there are some “portable stereo” controls (play, pause, rewind, record), a bookmarking tool, audio controls (headset icon) and video controls (computer monitor icon), as well as a tool to exit the exercise and module.

The stereo controls are self-explanatory, but a short description of how to use the “record” button when performing a consecutive or liaison interpreting exercise is needed. *Black Box* simulates consecutive and liaison interpreting by allowing students to alternate between the SL speech and their own rendition and storing both tracks in a single file. This means that a student listens to the SL speech, then records his or her interpretation, then listens to the following SL fragment, and so on. At the end of the dialogue, the whole recording can be played back and the student will hear the SL speaker's voice alternating with his or her own.

The bookmarking feature enables students to insert eight bookmarks in any given video or audio file whilst playing it, for example when they hear an unknown word or expression. At the end of the exercise, students can go back to those specific items simply by clicking on the relevant bookmark.

The video controls make it possible to gradually re-scale the video window, from miniature size to full screen. The audio controls, on the other hand, feature two volume boost buttons which increase the volume of the SL and TL speeches respectively. Students can also slow down the SL speech whilst they are playing it (but not whilst recording), without significantly altering the speaker's voice pitch. This tool is particularly useful to beginners when SL speakers have a strong accent (regional or foreign), or when students' SL comprehension is still imperfect.

Moreover, there are separate SL speaker's and interpreter's volume control bars as well, which means that after an exercise trainees can play back their own rendition with the SL speech in the background (for example, to monitor their time lag, or *décalage*) or, alternatively, with the original speech track off, to better focus their attention on their own delivery and presentation.

If students want to monitor the prosodic aspects of their performance, *Black Box* offers them another tool, the *Wave Viewer*, which visualizes frequency variations in the SL speaker's pitch as well as in the interpreter's rendition (see Fig. 5). The tool shows students the general prosodic patterns of their performance, including a visual representation of their pauses (blank parts in the graph). Under the teacher's guidance, the *Wave Viewer* can be used to increase students' awareness of the importance of prosodic aspects and to pinpoint specific problems in their delivery.

This brief overview of the main features of *Black Box* has highlighted the great teaching and learning potential of the program. However, successful implementation depends on the choices made by individual institutions and teachers, especially as regards the educational

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<sup>13</sup> For example, there is a swap mouse button plug-in for left-handers.

approach used (see 2.4). The following, final section (5) presents some conclusions and ideas for future developments.

## 5 Conclusions: best practice and future developments

*Black Box* has been developed as a CAIT tool to support the teaching and learning of interpreting, that is, to complement existing teaching methods in interpreter training. The interpreter training curriculum, if, as was discussed in (2.1), a single curriculum does indeed exist, places strong emphasis on students' autonomous practice. No trainee can attain the required standards just by attending classes. Individual and group work are an important part of any interpreter training course, and yet students do not always have access to suitable study support and appropriate practice materials. Moreover, section 2.4 has highlighted that self-assessment skills and the ability to assess other interpreters' performances are essential for trainees, both to ensure progress and to maintain quality standards in their future careers as professional interpreters. And yet, as was shown by Hartley et al. (2003), assessment criteria are often too vague and unclear to students.

*Black Box* is an attempt to respond to these challenges. By providing teachers with a user-friendly, flexible tool, it is hoped that they will exploit to the full the opportunities offered by today's mass media and technology to take the (comparatively little) time to create materials for students' self-study hours. Creating interpreter training exercises in the program is no more time-consuming than preparing class materials in the traditional way, i.e. finding suitable audio or video tape recordings or a speech transcript, and then highlighting the possible sources of difficulties for students, including cultural references, specific syntactic structures, language-pair related aspects, etc. Moreover, materials produced with *Black Box* by different universities could be exchanged to save time and expand the range of available speeches (topics, accents, speaking styles, etc.). Finally, *Black Box* makes it possible to establish a strong connection between class activities and self-study hours: for example, teachers can use the first part of a recording in class and then make the rest available to trainees through the program. Thus, teachers can feel confident that the self-study hours actively work as reinforcement activities and contribute to consolidating the techniques and principles presented in class.

As regards the students, the program enables them to save time and practise in a more structured and effective way, by giving them the tools to work in a dedicated environment. Moreover, one of the main benefits that *Black Box* can provide is self-pacing: students can take their time to study the teacher's notes, the style of the SL speech, the SL speaker's accent, etc. They can play the SL clip more than once, depending on their comprehension skills. They can repeat the same exercise several times, depending on the level of expertise they have achieved. In other words, they can obtain the individual focus that is not always possible in a class situation.

Moreover, working with the program does not necessarily mean working alone. Students can work in pairs or small groups on the same materials and swap their recordings to give each other feedback. Thanks to the file compression option, they can also take home their recordings over a period of time and store them to monitor their progress, or they can give them to their teachers to obtain feedback.

An important aspect of the program is all the post-task activities designed to make students aware of their strong and weak points. Clearly, students need to be taught how to carry out the self-assessment activities made possible by *Black Box*, including, for example, comparing one's recording with the SL speech transcript, identifying omissions, comprehension errors, TL production errors, correctly interpreting the *Wave Viewer* graph, and so on. Similarly, they need to be shown how to identify the differences between their own

rendition and the teacher's version, if it is available. In other words, students need to be taught in class how to assess their own performances in order to be able to do it properly when they are alone. In this regard, the development of an assessment grid such as the ones mentioned in (2.4) (Schjoldager 1996; Riccardi 2003) and its inclusion in the exercises provided can give students reliable indications, especially if it is illustrated and discussed in class in co-assessment activities led by trainers. In this respect, the use of *Black Box* could also open up interesting research prospects on assessment, particularly on the differences between teacher assessment and students' self-assessment, by making it possible to collect large quantities of data (completed assessment grids and recordings of interpreted performances) already in digital form and available in a compact electronic environment.<sup>14</sup>

As regards future developments of *Black Box* and CAIT in general, in the present globalized economy it seems likely that in the near future there will be increased pressure to reduce the duration of interpreter training courses and increase the range of an interpreter's working languages in order to meet market demands. This is particularly true in Europe, with the drive towards stronger European integration and the European Union enlargement process. The integrated use of CAIT software could contribute significantly to training without in any way reducing required standards. For example, it is easy to envisage new and improved ways of using *Black Box* in a LAN environment, in which the degree of interactivity among participants (and therefore available feedback) could be increased through the implementation of an internal e-mail system, a chat function, a class forum, a bulletin board, and so on, along the lines of what is already possible in the *Melissi Digital Classroom* (see 4.1). We are also looking into the possibility of adding a speech recognition element to the program, primarily to help students transcribe and analyze their own performances more easily. Moreover, new functions can be planned to make practice sessions with *Black Box* even more similar to actual interpreting assignments: for example, the interface layout could be changed to resemble more closely an interpreting booth with all its switches and buttons. If the program were installed on a LAN, the new "realistic" interface would also make it possible to organize special practice sessions on relay interpreting, in order to train students to use the relevant switches.

The above are just examples of simple additions that could be made to *Black Box* to further increase its teaching and learning potential. However, the real challenge that lies ahead is certainly the development of a Web-based virtual learning environment (VLE) for interpreter training. Distance learning of interpreting is not impossible: indeed, there is already an example of distance courses in court and health care interpreting offered by the *Vancouver Community College* in Canada. However, these courses only make use of the Internet and e-mail as communication tools, whereas teaching materials are distributed on VHS and CD-Rom. Delivering courses via the Web presents a number of technical and pedagogical problems, but it is certainly not as far ahead as one might think. For a start, it is already possible to envisage the use of a server from which students could download exercises onto their machines to use them off-line (thus avoiding altogether any technical problems). However, it must be noted that such developments can only be envisaged with the cooperation of a number of different institutions, including universities and educational software development companies. It is hoped that this paper may contribute to sparking off a debate on these important challenges that will affect the education and training of future generations of interpreters.

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<sup>14</sup> In this regard, it should be noted that Lessius Hogeschool (Antwerp), the first Melissi customer to equip its interpreting lab with *Black Box*, has recently set up a two-year research position in *Interpreting* which includes, among other tasks, assisting in a peer and self-assessment project based on *Black Box* (see: [www.lessius-ho.be](http://www.lessius-ho.be)).

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## Intralingual speech-to-text-conversion in real-time: Challenges and Opportunities

### Contents

- 1 The need for real-time speech-to-text conversion
- 2 The challenges of speech-to-text-conversion in real-time
- 3 Methods of real-time speech-to text conversion
- 4 Text adaptation
- 5 Presentation format
- 6 Perspectives
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### Abstract

Intralingual speech-to-text-conversion is a useful tool for integrating people with hearing impairments in oral communication settings, e. g. counselling interviews or conferences. However, the transfer of speech into written language in real time requires special techniques as it must be very fast and almost 100% correct to be understandable. The paper introduces and discusses different techniques for intralingual speech-to-text-conversion.

### 1 The need for real-time speech-to-text conversion

Language is a very fast and effective way of communicating. To use language means to express an unlimited amount of ideas, thoughts and practical information by combining a limited amount of words with the help of a limited amount of grammatical rules. The result of language production processes are series of words and structure. Series of words are produced – i.e. spoken or signed – in a very rapid and effective way. Any person can follow such language production processes and understand what the person wants to express if two preconditions are fulfilled the recipients must:

1. know the words and grammatical rules the speaker uses and
2. be able to receive and process the physical signal.

Most people use oral language for everyday communication, i.e. they speak to other people and hear what other people say. People who are deaf or hard-of-hearing do not have equal access to spoken language, for them, precondition 2 is not fulfilled, their ability to receive speech is impaired.

If people who are severely impaired in their hearing abilities want to take part in oral communication, they need a way to compensate their physical impairment<sup>1</sup>. Hearing aids are sufficient for many hearing impairment people. However, if hearing aids are insufficient,

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<sup>1</sup> To provide access to oral communication situations for hearing impaired people is an issue of fairness which, in recent years, is increasingly reflected by national governments. In some countries laws stipulate that at least authorities and official institutions provide information in a form which is also accessible for people with an impairment. Consequently, auditory information has to be provided in a way which can also be detected visually or haptically by people with a hearing impairment (cf. S. Wagner et al., 2004).

spoken language has to be transferred into a modality which is accessible without hearing, e.g. into the visual domain.

There are two main methods to transfer auditory information into a visible format. The translation into sign language is one method and it is best for people who use sign language as a preferred language, as e.g. many Deaf people do. However, for people with a hearing disability who do not know sign language, sign language interpreting is not an option — as for many Hard of Hearing people and people who became hearing impaired later in their life or elderly people with various degrees of hearing loss. They prefer their native oral language given in a visible modality. For them, a transfer of spoken words into written text is the method of choice, in other words: they need an intralingual speech-to-text-conversion.

Speech-to-text-translation (audiovisual translation) of spoken language into written text is an upcoming field since movies on DVDs are usually sold with subtitles in various languages. While the original language is given auditorily, subtitles provide a translated version in another language at the same time visually. The audiovisual transfer from the spoken original language into other languages which are presented in the subtitles can be called an interlingual audiovisual translation. Interlingual translation aims at transferring messages from one language into another language. This translation process combines classical interpreting with a transfer from spoken language patterns into written text patterns. Auditory events which are realized as noises or speech melodies would often not be transferred because normally hearing people can interpret them by themselves. Interlingual translation primarily addresses the lack of knowledge of the original language, i.e. the first precondition for understanding language.

The intralingual audiovisual transfer differs in many aspects from the interlingual audiovisual translation between two languages.

First of all, intralingual audiovisual transfer for people with hearing impairments addresses primarily precondition 2, i.e. the physical ability to perceive the speech signals. The aim of an intralingual audiovisual transfer is to provide all auditory information which is important for the understanding of an event or action. Words as well as non-language sounds like noises or hidden messages which are part of the intonation of the spoken words (e.g. irony or sarcasm) need to be transmitted into the visual (or haptic) channel. How this can be achieved best, is a question of present and future research and development (cf. Neves, in this book). Moreover, people with hearing impairment may insist on a word-by-word-transfer of spoken into written language because they do not want a third person to decide which parts of a message are important (and will therefore be transferred) and which parts are not. As a result, intralingual audiovisual transfer for people with hearing impairment might mean that every spoken word of a speech has to be written down and that all relevant auditory events from outside of the speech have to be described, too (interruptions, noises). In the latter case, the intralingual audiovisual transfer would exclusively satisfy the physical ability to perceive the speech signal (precondition 2).

The classical way to realize an intralingual speech-to-text transfer is to stenotype a protocol or to record the event and to transfer it into a readable text subsequently. This post-event transfer process is time-consuming and often difficult, since auditory events easily become ambiguous outside of the actual context. Moreover, the time shift involved in the transfer into a readable text means a delayed access to the spoken words, i.e. it does not help people with hearing impairments in the actual communication situation. However, for counselling interviews, at the doctor's or at conferences, access to spoken information must be given in real-time. For these purposes, the classical methods do not work.

## 2 The challenges of speech-to-text-conversion in real-time

Real-time speech-to-text-conversion aims at transferring spoken language into written text (almost) simultaneously. This gives people with a hearing impairment, access to the contents of spoken language in a way that they e.g. become able to take part in a conversation within the normal time frame of conversational turn taking. Another scenario for real-time speech-to-text-transfer is a live broadcast of a football match where the spoken comments of the reporter are so rapidly transferred into subtitles that they still correspond to the scene the reporter comments on. An example from the hearing world would be a parliamentary debate which ends with the electronic delivery of the exact word protocol presented to the journalists immediately after the end of the debate. (cf. Eugeni, forthcoming)

This list could be easily continued. However, most people with a hearing disability do not receive real-time speech-to-text services at counselling interviews, conferences or when watching a sports event live on TV. Most parliamentary protocols are tape recorded or written stenotyped and subsequently transferred into readable text. What are the challenges of real-time speech-to-text conversion that make its use so rare?

### 2.1 Time

A good secretary can type about 300 key strokes (letters) per minute. Since the average speaking rate is about 150 words per minute (with some variance between the speakers and the languages), even the professional typing rate is certainly not high enough to transfer a stream of spoken words into a readable form in real-time. As a consequence, the speed of typing has to be increased for a sufficient real-time speech-to-text transfer. Three different techniques will be discussed in the following section “methods”.

### 2.2 Message Transfer

The main aim of speech-to-text transfer is to give people access to spoken words and auditory events almost simultaneously with the realization of the original sound event. However, for people with limited access to spoken language at a young age, 1:1 transfer of spoken words into written text may sometimes not be very helpful. If children are not sufficiently exposed to spoken language, their oral language system may develop more slowly and less effectively compared with their peers. As a result, many people with an early hearing impairment are less used to the grammatical rules applied in oral language as adults and have a less elaborated mental lexicon compared with normal hearing people (Schlenker-Schulte, 1991; see also Perfetti et al. 2000 with respect to reading skills among deaf readers)<sup>2</sup>.

If words are unknown or if sentences are too complex, the written form does not help their understanding. The consequence for intralingual speech-to-text conversion is that precondition 1, the language proficiency of the audience, also has to be addressed, i.e. the written transcript has to be adapted to the language abilities of the audience - while the speech goes on.

Speech-to-text service providers not only need to know their audience, they also have to know which words and phrases can be exchanged by equivalents which are easier to

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<sup>2</sup> Apart from people who were born with a more severe hearing impairment, language proficiency might differ also for people with cultural backgrounds different from a majority group, people with other mother tongues or people with learning difficulties.

understand, and how grammatical complexity can be reduced. They need to know techniques of how to make the language in itself more accessible while the information transferred is preserved. Aspects of how language can be made more accessible will be discussed in the following section “text adaptation”.

### **2.3 Real-time presentation of the written text**

Reading usually means that words are already written down. Presented with a written text, people will read at their individual reading speed. This, however, is not possible in real-time speech-to-text conversion. Here, the text is written and read almost simultaneously, and the control of the reading speed shifts at least partly over to the speaker and the speech-to-text provider. The text is not fixed in advance, instead new words are produced continuously and readers must follow this word production process very closely if they want to use the real-time abilities of speech-to-text transfer. Because of this interaction of writing and reading, the presentation of the written text must be optimally adapted to the reading needs of the audience. This issue will be discussed at the end of the paper in section “presentation format”.

The challenges of real-time speech-to-text conversion can now be summarized as follows:

1. to be fast enough in producing written language that
2. it becomes possible to meet the expectations of the audience with respect to the characteristics of a written text. Word-by-word transfer enhanced by a description of auditory events from the surroundings as well as adaptations of the original wording into easier forms of language must be possible. Moreover,
3. a successful real-time presentation must match the reading abilities of the audience, i.e. the written words must be presented in a way that is optimally recognizable and understandable for the readers.

## **3 Methods of real-time speech-to text conversion**

There are three methods that are feasible when realizing (almost) real-time speech-to-text transfer: speech recognition, computer assisted note taking (CAN) and communication access (or computer aided) real-time translation (CART). The methods differ

1. in their ability to generate exact real-time transcripts.
2. with respect to the conditions under which these methods can be properly applied and
3. with respect to the amount of training which is needed to become a good speech-to-text service provider.

### **3.1 Speech recognition**

Automatic speech recognition (ASR) technologies today can correctly recognize and write down more than 90% percent of a long series of spoken words for many languages. However, even this high percentage is not sufficient for speech-to-text services, since 96+x% correctness is needed to provide a sufficient message transfer (Stinson et al. 1999: accuracy). Moreover, even the 90+x% accuracy in automatic speech recognition does not occur by itself. In order to be recognized, the speaker has to train the speech recognition system in advance with her/his voice and speaking characteristics. Some regional speaking characteristics (dialects) are generally only poorly recognized, even after extensive training. Physical changes in voice quality (e.g. from a flu) can result in poorer recognition results. The reason for this is that the speech recognition process is based on a match of physical parameters of the actual speech signal with a representation which was generated on the basis of a general

phonetic model of language and the phonetic and voice data from the individual training sessions. If the individual physical parameters differ from those of the training sessions, recognition is less successful. Moreover, if background noise decreases the signal-to-noise-ratio, accuracy might go down to below 80 percent.

However, speech recognition systems can meet challenge number 1 (writing speed) under good circumstances. In this case, the recognition rate of ASR would in principle be high enough to transfer every spoken word into written text in real-time. But there are limitations which have to be taken into account. The most restrictive factor is that automatic speech recognition systems are not (yet) capable of recognizing phrase- and sentence boundaries (but see Leitch et al. 2002). Therefore, the output from an automatic speech recognition system is a stream of words without any comma or full stop. Moreover, the words would not be assigned to the different speakers. An example from Stuckless (1999) might illustrate how difficult it is to understand such a stream of words:

“why do you think we might look at the history of the family history tends to dictate the future okay so there is some connection you're saying what else evolution evolution you're on the right track which changes faster technology or social systems technology.” (Stuckless 1999)

Automatic speech recognition today fails as far as challenge 3 is concerned.: Although the single words are readable, the output of automatic speech recognition systems is almost not understandable for any reader.

The short-term solution for this problem is that a person, who has trained her/his speech recognition system extensively with his/her speaking characteristics, has to re-speak the speech of the speaker with explicit punctuation commands and speaker identification. With re-speaking, speech recognition is an option especially for live subtitling and conferences where the speech-to-text conversion can be made in a studio or sound shielded room. With respect to the need of an excellent signal-to-noise-ratio, it is certainly not an option for noisy surroundings.

Re-speaking has advantages though. It makes it possible to adapt the spoken language for an audience with limited oral language proficiency. This would not be possible with automatic speech recognition.

Real-time speech-to-text conversion with speech recognition systems does not require special technical knowledge or training except for the fact that the SR- system has to be trained. For the user it is sufficient to speak correctly. However, linguistic knowledge and a kind of “thinking with punctuation” is necessary to dictate with punctuation marks.

## **Summary of speech recognition**

*Automatic* speech recognition is not yet an option for speech-to-text transfer since phrase- and sentence boundaries are not recognized. However, speech recognition can be used for real-time speech-to-text conversion if a person re-speaks the original words. Re-speaking is primarily necessary for including punctuation and speaker identification but also for adapting the language to the language proficiency of the audience. Apart from an intensive and permanent training of the speech recognition engine, no special training is required. A sound-shielded environment is useful. The use of a speech recognition systems does not require any special training. Linguistic knowledge, however, is necessary for the chunking of the words and for adaptations of the wording.

### **3.2 Computer-assisted note taking (CAN)**

With computer-assisted note taking (CAN), a person writes into an ordinary computer what a speaker says. However, as was discussed earlier, even professional writing speed is not sufficient to write down every word of a speech. To enhance writing speed, abbreviation systems are used in computer-assisted note taking which minimize the amount of key strokes per word. The note taking person types abbreviations or a mixture of abbreviations and long forms. An abbreviation-to-long-form dictionary translates the abbreviations immediately into the corresponding long form. On the screen, every word appears in its long form.

Realizations of CAN systems are widespread. On the one hand, small systems are incorporated in almost every word processing software. The so called “auto correction” translates given or self defined abbreviations into the corresponding long forms. On the other hand, there are very elaborated and well developed systems like e.g. C-Print which has been developed at the National Technical Institute for the DEAF at Rochester Institute of Technology (RIT 2005). This system uses phonetic rules to minimize the key strokes for every word. After a period of training with the system, the captionist is able to write with a higher speed. This allows for a high quality message transfer. However, the writing speed is still limited so that word-for-word transcripts are rather unusual, even with C-Print. With CAN-systems like C-Print, a message-to-message rather than a word-for-word transfer is produced.

The efficiency of CAN systems is mainly determined by the quality of the dictionary which translates the short forms into the corresponding long forms. The better the dictionary, the higher the typing speed potential.

Individually made dictionaries are mostly a collection of abbreviations like ‘hv’ for ‘have’ and ‘hvt’ for ‘have to’ etc. However, this kind of dictionary is limited insofar as the user has to know every abbreviation. Consequently, the amount of time which is needed for people to learn and to prevent them from forgetting the abbreviations once learned increases with the increase in the size of the dictionary.

Elaborated systems like C-Print use rule-based short-to-long translations. Here, the captionist has to learn the rules of transcription. One rule could be that only consonants but not vowels are written down. The resulting ambiguities (e.g. ‘hs’ for ‘house’ and ‘his’) have to be resolved by a second rule. However, orthographic transcription rules turned out to be rather complicated – at least in English. Therefore, systems like C-Print are often based on a set of rules which are in turn based on a phonetic transcription of the spoken words. On the basis of a set of shortening rules, the note taking person does not write certain graphemes but phonemes of the spoken words.

#### **Summary of CAN-systems:**

CAN-systems can be used for real-time speech-to-text conversion if a message-to-message transfer is sufficient. For word-for-word transfers, the typing speed of CAN-systems is not high enough.

The quality and speed of the transfer depends on the kind and quality of the dictionary which translates abbreviations or shortened words into the corresponding readable long forms. To use a CAN-system, the note taking person needs to learn either the abbreviations of the short-to-long dictionary or the rules of short-phoneme/grapheme-to-long-grapheme conversion the dictionary is based on.

Linguistic knowledge is necessary for adaptations of the wording.

### 3.3 Communication access real-time translation (CART)

Communication access real-time translation (CART) uses stenography in combination with a computer based dictionary. The phonemes of a word are typed on a steno keyboard which allows the coding of more than one phoneme at a time. It is thus possible to code e.g. one syllable by a simultaneous key press with up to all 10 fingers: The left keys on the keyboard are used to code the initial sound of the syllable, the down keys code the middle sound and the right keys of the keyboard code the final sound of the syllable. For high frequency words or phrases, prefixes and suffixes, abbreviations are used.

The phonetic code of the words or the respective abbreviation is immediately translated into the corresponding long form by a sophisticated dictionary. An example (taken from [www.stenocom.de](http://www.stenocom.de), cf. Seyring 2005) can illustrate the advantage with respect to typing speed:

a) typing on a normal keyboard: 88 strokes

*Ladies and Gentlemen! The people want to have calculability and stability.*

b) Same words in machine steno code: 12 strokes

(The code between two spaces is 1 stroke, typed with up to 10 fingers.)

*HRAEUPLBG STPH T PAOEPL WAPBT TO\*F KAL KUL BLT APBD STABLT FPLT*

The parallel typing with CART systems results in a high typing speed which is sufficient for word-for-word transcripts in real-time. The phonetic transcription reduces ambiguities between words and allows real-time accuracy levels of more than 95%. Moreover, if the audience is not interested in word-for-word conversion, CART systems can also be used for message-to-message transfers since they allow adaptations of the wording in real-time.

CART-systems can be used in silent or noisy surroundings, their efficiency mainly relies on the education of the person who does the writing. However, the education of the speech-to-text provider is one of the most limiting factors of CART systems. 3-4 years of intensive education with a lot of practicing are the minimum for a person to become a CART speech-to-text provider who produces text in sufficient quality (less than 4% of errors) and speed (ca. 150 words per minute). The second limitation of CART is the costs for the steno system of around 10.000 Euro.

#### Summary of CART-systems:

CART systems are highly flexible tools for real-time speech-to-text conversion. They can be used in noisy or silent surroundings for word-for-word as well as for message-to-message transfer. The limitations of CART are located outside of the system, i.e.

- the long period of training which is needed to become a good CART provider
- the costs of the steno system

### 3.4 Comparison of Speech Recognition, CAN- and CART-systems

	<b>Speech Recognition with re-speaking</b>	<b>Computer-Assisted Note-taking</b>	<b>Communication Access Real-time Translation</b>
Exact word protocols	Yes	almost, but needs a lot of training and a sophisticated dictionary	Yes
Language adaptations	Possible with re-speaking	Yes	Yes
Education to use the method	Some hours for initial training of SR-system	some weeks- months	3-4 years
Special conditions	Minimum background noise	None	None
Cost of equipment <sup>1</sup>	100-200 € SR-system 50-100 € good microphone (opt.) 1.000 Euro notebook	1.000 € notebook (+ licence for the dictionary)	~ 10.000 € steno machine 1.000 € notebook (+ licence for the steno-longhand dictionary)

Table 1: Speech recognition, computer-assisted note-taking and communication access real-time translation in comparison.

## 4 Text adaptation

Spoken and written forms of language rely on different mechanisms to transfer messages. Speech for instance is less grammatical and less chunked than text. A real-time speech-to-text conversion - even if it is a word-for-word service - has to chunk the continuous stream of spoken words into sentences and phrases with respect to punctuation and paragraphs in order for the text to be comprehensible. A correction of grammatical slips might be necessary, too, for word-for-word conversions and even more corrections may be necessary for an audience with less language proficiency. While intonation may alleviate incongruencies in spoken language, congruency errors easily cause misinterpretation in reading.

The transfer from spoken into written language patterns is only one method of text adaptation. As discussed earlier, the speech-to-text provider might also be asked to adapt the written text to the language proficiency of the audience. Here, the challenge of word-for-word transfer shifts to the challenge of message transfer with a reduced set of language material. A less skilled audience might be overstrained especially with complex syntactical structures and low frequent words and phrases. The speech-to-text provider therefore needs to know whether a word or phrase can be well understood or should better be exchanged with some more frequent equivalents. S/he also has to know how to split long and complex sentences into simpler structures to make them easier to understand.

The know how of text adaptation with respect to the needs of the audience is highly language- and field-specific. People who become C-Print captionists learn to use text condensing strategies which is mainly aimed at reducing key strokes (RIT 2005) but might also reduce grammatical complexity and lexical problems. However, a recent study on the effects of summarizing texts for subtitling revealed that “summarizing affects coherence relations, making them less explicit and altering the implied meaning” (Schilperoord et al. 2005, p.1). Further research has to show whether and how spoken language can be condensed in real-time without affecting semantic and pragmatic information.

For German, it has already been shown that test questions can (offline) be adapted linguistically without affecting the content of the question. That is, many words and structures can be replaced by equivalents that are easier to understand (cf. Cremer 1996; Schulte 1993; Wagner et al. 2004). Further research will have to show whether this kind of text adaptation on word-, sentence- and text level (in German called “Textoptimierung”) can also be realized in real-time.

## **5 Presentation format**

The last challenge of real-time speech-to-text transfer is the presentation of the text on the screen in a way that reading is optimally supported. The need to think about the presentation format is given as the text on the screen is moving which is a problem for the reading process. We usually read a fixed text, and our eyes are trained to move in saccades (rapid eye movements) on the basis of a kind of preview calculation with respect to the next words (cf. Sereno et al. 1998). But in real-time speech-to-text systems, the text appears consecutively on the screen and new text replaces older text when the screen is filled. A word-by-word presentation as a consequence of word-for-word transcription could result in less precise saccades which subsequently decreases the reading speed. Reading might be less hampered by a presentation line-by-line, as it is e.g. used in C-Print (cf. the online presentation at <http://www.rit.edu/~techsym/detail.html#T11C>). However, for slower readers, also line-by-line presentation might be problematic since the whole “old” text is moving upwards whenever a new line is presented. As a consequence, the word which was actually fixated by the eyes moves out of the fovea and becomes unreadable. The eyes have to look for the word and restart reading it.

The optimal presentation of real-time text for as many potential readers as possible is an issue which is worth further research, not only from the perspective of real-time transcription but also for subtitling purposes.

## **6 Perspectives**

Real-time speech-to-text transfer is already a powerful tool which provides people with a hearing impairment access to oral communication. However, elaborated dictionaries as they are needed for efficient CAN- or CART-systems are not yet developed for many languages. Without those dictionaries, the systems can not be used.

Linguistic research has to find easy but efficient strategies for the real-time adaptation of the wording in order to make a message understandable also for an audience with limited language proficiency.

Finally, the optimal presentation of moving text to an audience with diverging reading abilities is a fascinating research field not only for real-time speech-to-text services but with respect to the presentation of movable text in general.

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# How to Make a Haptic Device Help Touch Virtual Histological Slides

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- 2 Materials and Methods
- 3 Results
- 4 Discussion
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## Abstract

Virtual reality can be used to simulate features of specific materials in order to provide a sense of direct contact with the simulated object. The present study concentrates on informational aspects related to the transformation of visual into haptic data. The current trial was conducted to compare two studies. Study 1 was carried out to help teach blind and visually impaired people histology while study 2 was initiated to generate the basis for simulated facial cleft surgery. Although both tasks are based on a transfer of histological slides into a polygonal mesh the degree of complexity differed considerably with the respective task. Despite the fact that both studies relied on well-established methods in computer graphics and haptic rendering, study 2 requires a higher degree of computational literacy than does study 1. This led to a hypothesis of why the transfer of visual to haptic data is not often reported in the biomedical sciences. Future studies need to incorporate touch into virtual environments to enhance realism of virtual medical environments and to make biomedical sciences more accessible to blind and visually impaired individuals.

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# **1 Introduction**

## **1.1 General**

It is generally acknowledged that research is required whenever information has to be converted from one mode into another. A haptic device can convert pictorial data into tactile information. The authors of the present study are therefore evaluating the use of a haptic device in the biomedical sciences. The field of surgery (as in Study 2 see below) may for instance benefit from surgeons trained in simulations (Montgomery et al. 2003, Schendel et al. 2005). It is also possible to use aspects of this approach to teach blind or visually impaired people rather abstract concepts such as microscopic biology (Study 1). The transformation of pictorial information into a tactile representation is the common trunk (Fig. 1). Advanced simulated surgery demands a reduced degree of simplification and steps towards controllable complexity while successful transformation for the blind and visually impaired often requires a considerable reduction in complexity. The present report may give a representation on problems associated with preparations to overcome this dilemma.

## **1.2 Histology**

Histology involves the use of a set of techniques to examine the morphology, composition, and architecture of tissues. The desired tissue is first removed from the organism and then placed in fixative in order to preserve the structure of the tissue. Common fixatives used for light microscopy and histochemistry often include formaldehyde (formalin) as most histological staining methods, but not all, allow its use.

Fixation provides rigidity to the tissue as cross-linking covalent bonds are formed between and within the amine groups of the tissue. The tissue is usually kept in the fixative overnight. Extended fixation times may cause damage to the sample which becomes apparent in artifacts at high levels of magnification. Once cells and tissue have been fixed, they can be kept indefinitely at room temperature as fixation makes it easier to section the sample. After completion of fixation, the macromorphology of the specimens is documented. Large samples are then sectioned for further processing while small samples are directly processed for histochemical staining. In order to do this, tissues are dehydrated by first using graded ethanol solutions, followed by xylene. The graded solutions gradually expose the sample to changes in hydrophobicity, minimizing damage to cells. Usually, tissue samples are then embedded in a material with mechanical properties similar to their mechanical properties which eases subsequent slicing with a microtome. It is common to use paraffin wax for embedment. Once the wax-tissue complex is allowed to solidify it forms a block that can be held in a microtome for plain sectioning.

Samples embedded in paraffin are first mounted in a microtome which holds a sharp blade. It is controlled by a crank that is turned to bring the paraffin block closer to the blade. The microtome can be adjusted for width and angle of cut and so as the crank is operated further, the blade cuts slices of paraffin that contain the tissue. After several slices of the paraffin-embedded tissue have been cut, the slices are gently brushed from the blade and floated atop a water bath to smooth out the sample. The slices are teased apart and floated onto a glass slide. After the slides have dried, they are placed in an oven to “bake” the paraffin. This process is followed by component identification via staining (e.g. histochemistry). Different staining techniques are available to color components of interest

referentially. The most commonly applied stain is called Hematoxylin and Eosin (H and E) in which the hematoxylin component makes nuclei appear dark blue while eosin stains the remaining cell components (such as the cytoplasm) reddish (Fig. 2).

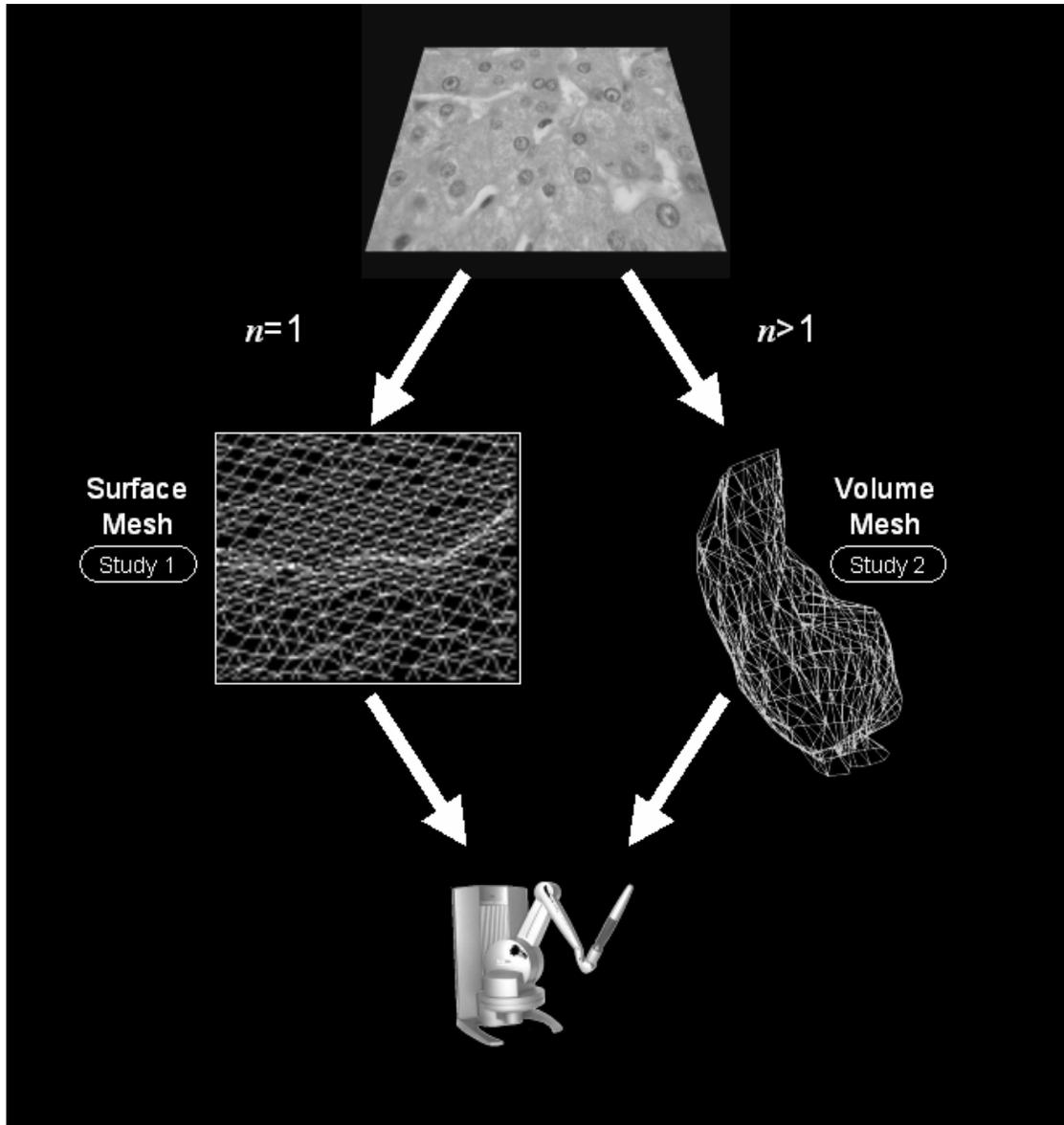


Fig. 1: Information transfer is identical for both studies: for each of the two studies pictorial information is translated into a virtual mesh to be further processed by a haptic device. The term  $n$  represents the number of digital images required for translation

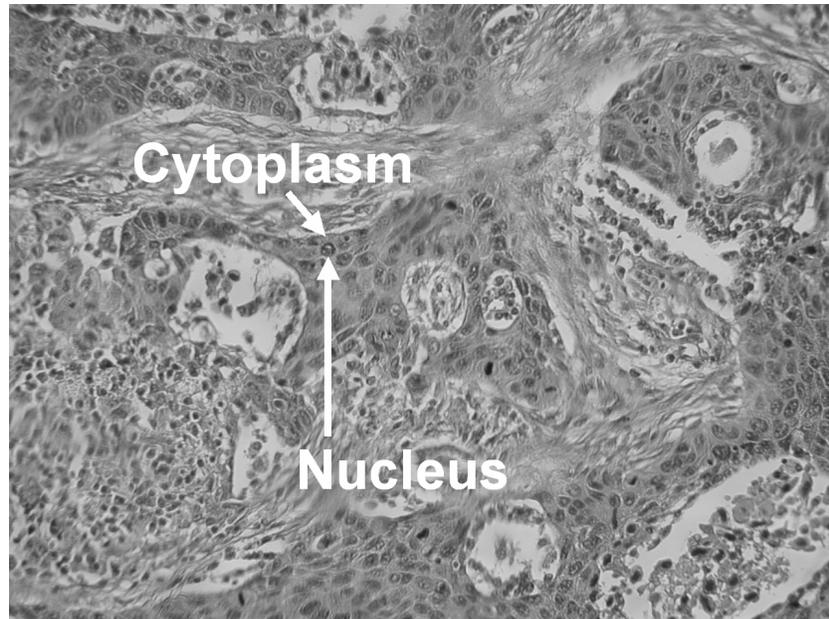


Fig. 2: Real histological slide prior to segmentation. A squamous cell carcinoma with a considerable desmoplastic stroma reaction (H&E staining).

### 1.3 Segmentation

A variety of digital cameras may be used to obtain photographs that can be further processed by a computer. Digitalization will be followed by segmentation and classification which is performed to break the images into parts, objects or patches with similar properties (Fig. 3).

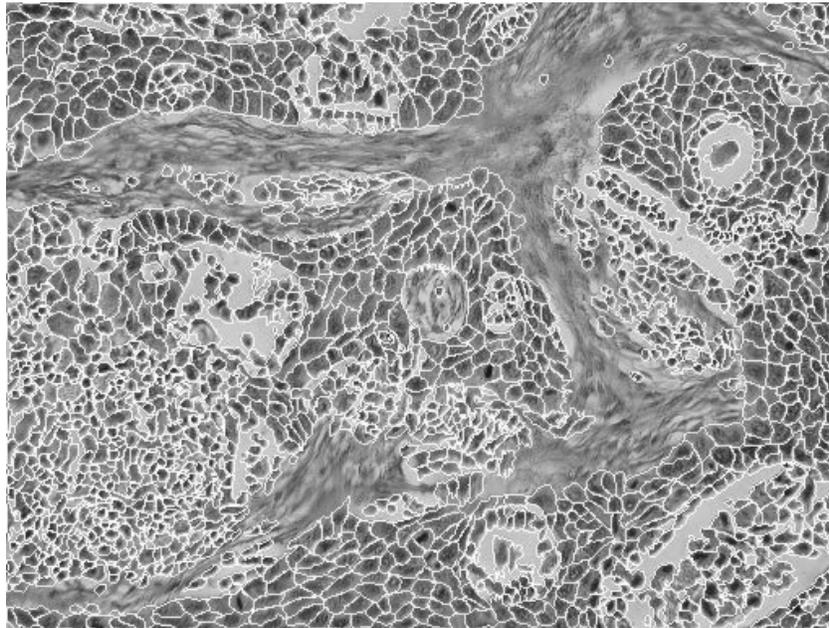


Fig. 3: The real histological slide depicted in Fig. 1, now segmented. The image contains 1,753 classified objects. Most parts of the desmoplastic stroma reaction however are not segmented as they will be modeled mathematically.

## 1.4 Rendering

The aim of rendering is to generate new synthetic slides adapted from the segmented and classified slides of the previous step.

## 1.5 Preparation

Information provided by photographs of real histology is too complex for teaching a blind or visually impaired individual histology by the means of a haptic device. This led to the idea to reduce complexity by generating virtual representations of the photographs of real histological slides (Fig. 4).

For simulating microsurgery, a stack of histology pictures has to undergo 3D reconstruction to generate a complex virtual three dimensional object (Fig. 5) that can be manipulated with a haptic device. Virtual surgery benefits from photorealistic visualization and other aspects of increased complexity.

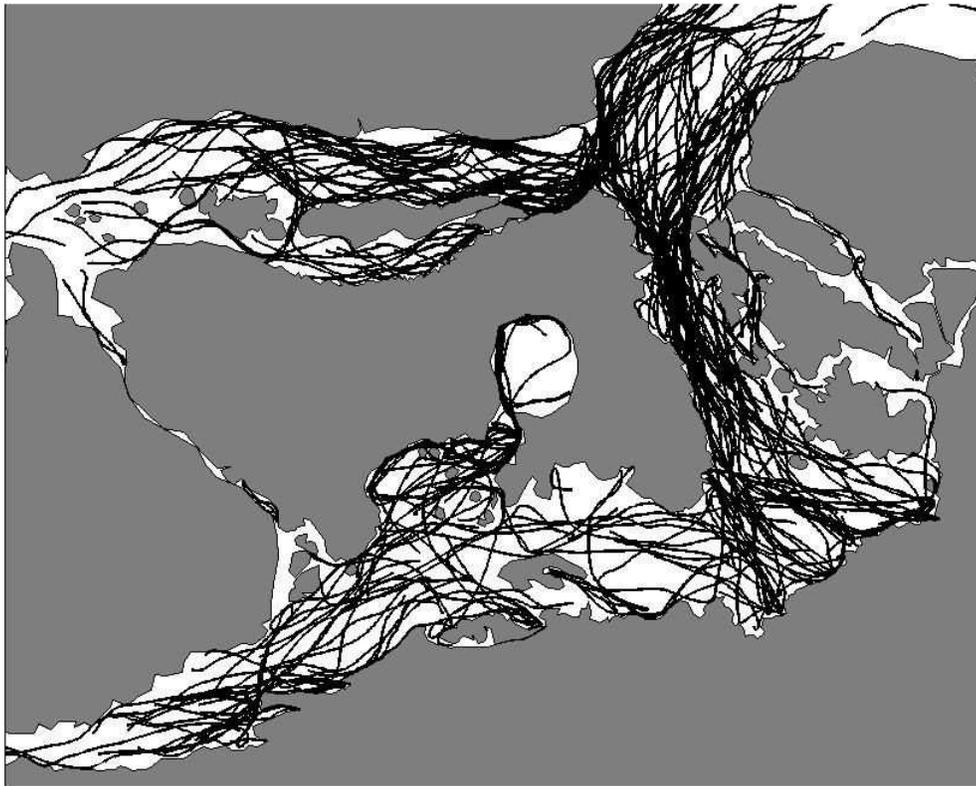
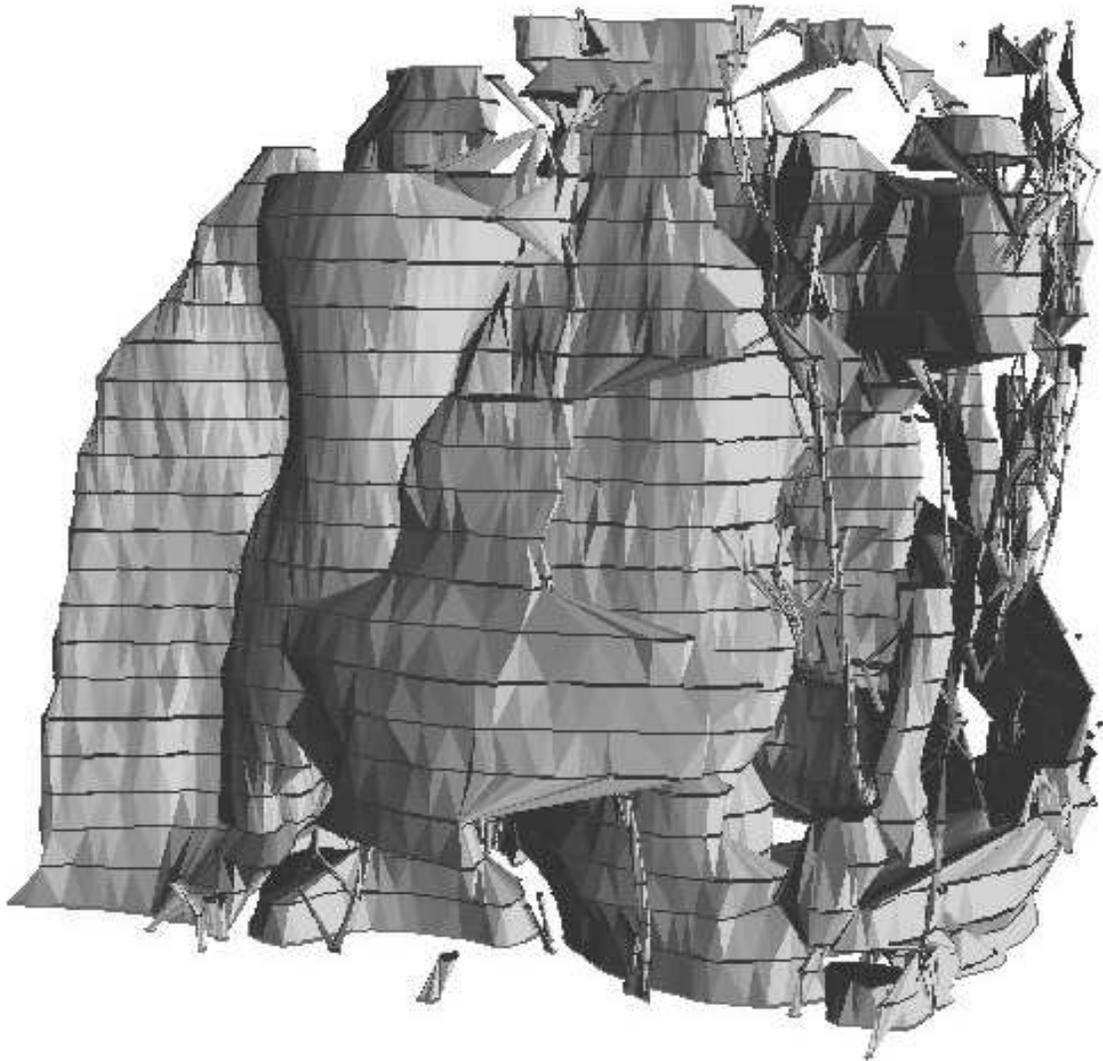


Fig. 4: Virtual histological slide. Early steps in the mathematical model of the desmoplastic stroma reaction showing trajectories of simulated fibroblasts, smoothed with a Savitzky-Golay filter. In this model, each cell was characterized by its position and velocity both of which are time-dependent. The trajectories are stochastic processes, where for the speed a modified Langevin equation was assumed. Included impulses for the velocity-vector were chemotaxis, contact guidance, friction and random fluctuation. While the cell characteristics were meshfree, this did not hold for the collagen fibres: They were modelled as a vectorfield on regular cartesian grid. So the interactions between the different variables (fibres: discrete, cells: continuum) lead to a hybrid discrete-continuum model. It is clear that because of the enormous complexity of the mathematical model lots of parameters arise. Most of these parameters are unknown at this point of research, so they were estimated by trial-and-error. The stroma was simulated to interact with the virtual representation of the squamous cell carcinoma shown in Fig. 1. The degree of complexity has therefore been reduced which also allows a blind or visually impaired person to “read” the scenario once transformed into haptic signals.



*Fig. 5: An early step in a virtual 3D reconstruction based on a stack of histological slides (dark lines) of a fetal cleft palate. Note that the structures are still triangular which represents a reduced degree of realism and thereby complexity. Unlike for study 1, a considerable reduction of controllable complexity appears to not be desirable for study 2. Applicability for surgical training therefore requires an increase in photorealism and other aspects of complexity.*

## 1.6 Haptic Device

A haptic interface can be used to subjoin a sense of touch to interactions in combination with a virtual representation. The forces of interaction between the objects in the virtual scene are calculated and thereafter reflected to the user to give a feeling of real touch (Salisbury et al. 1995, Srinivasan 1995). The object of interest can either be a single virtual histological slide or a stack of histological slides after 3D reconstruction. The procedure of determining the forces of interaction between the different objects in the scene is called haptic rendering (Fig. 6). Haptic rendering methods are based on a geometric surface representation (i.e. polygonal mesh) of the digitalized histological slides. The principle of haptic rendering is that the user interacts with the stylus of the haptic device and the computer registers the new spatial

position. The position is then compared with the boundaries of the virtual objects the aim of which is to detect collisions between the virtual hand and the objects. The collision detection feature examines whether two objects overlap and in case they do overlap it quantifies the depth of penetration of the stylus relative to the object boundaries (Basdogan 2001, Cohen et al. 1995, Hubbard 1995), however, if the application detects a collision between the stylus and a boundary of an object the haptic device has to react to this fact. This is done by activating the motors of the device to force the real hand of the user in a diametrical direction. For effective collision detection, the authors of the present study are using binary space partition trees. The basic idea of binary space partition trees is to insert all objects of the virtual scene into the a binary tree and each object partitions the space (Fuchs et al. 1980). For teaching blind or visually impaired individuals histology, the result of collision detection and response is preventing the proxy (i.e., the virtual representation of the stylus of the haptic device) from penetrating the boundary of a virtual object. In case of simulated surgery, however, penetration should be possible as virtual tissues have to be cut.

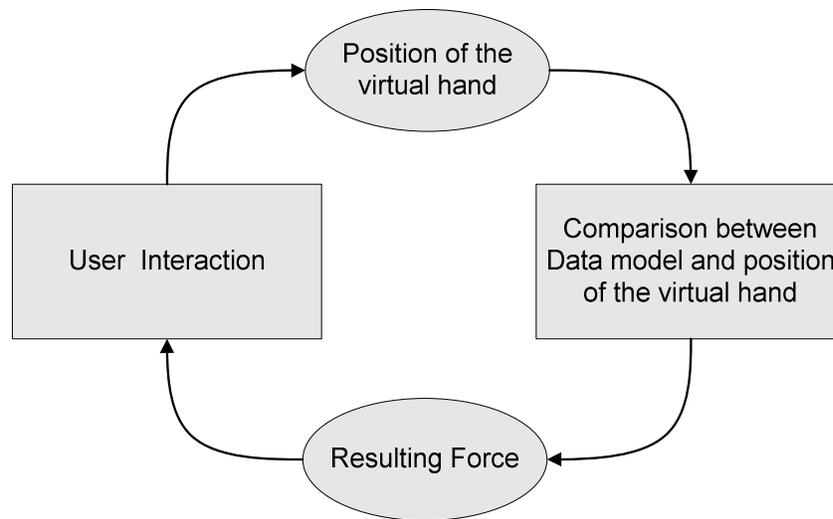


Fig. 6: Principle of the control scheme for haptic rendering (Sjöström 2002, modified).

## 1.7 Bibliometry

The use of haptic devices in the biomedical sciences can be quantified by conducting a bibliometric survey. Two databases stand out for analysis. PubMed is a biomedical database, developed by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine (NLM), Bethesda, MD, USA, while Inspec is a bibliographic database produced by the Institution of Electrical Engineers (IEE), London, UK, which covers physics, electronics and computing. Analyses of the datasets of references retrieved from the databases give a synoptic overview of how the literature can serve to indicate the status of research activity and therefore give a microcosmic view of the state of research on the topic as it indicates, the currency of the research; the volume of research output in the form of published articles and conference papers; the degree of collaboration among researchers; the preponderance of research output by specific countries; and the predominance of any particular language of the published material.

Medical bibliographic from Pubmed information is available in two databases, Medline, which covers medicine, nursing, dentistry, veterinary medicine, the health care system, and the preclinical sciences in over 4,800 journals published in the United States and 70 other

countries. The database contains over 12 million bibliographic citations from 1966 to the present and while coverage is worldwide in scope most records are from English language sources or have English abstracts. So called Old Medline contains approximately 2 million citations to articles from international biomedical journals from 1950 to 1965. PubMed provides users with links to online resources including full-text articles (access being free for some while for others a subscription is required), other databases, and search tools.

Inspec indexes over 4000 journals with journal articles constituting 82% of its bibliographic material; books, dissertations and reports; and conference papers which constitute 21% of its material. This variety in the material covered is a notable difference when compared to Medline which consists entirely of journal articles. The database covers 1969 to the present and to date has over 7.5 million citations.

Collaboration in research activity and research output by publication is indicated by the level of co-authorship. Lotka's Law of scientific Productivity of Authors (Lotka 1926) for instance states that the number of authors making  $n$  contributions to the literature is about  $1/n^2$  of those making one contribution.

## **2 Materials and Methods**

### **2.1 Bibliometry**

Relevant references were sought by interrogating the databases PUBMED and INSPEC (as of August 2005). The search was conducted using the search terms 'haptic device', 'tactile device', 'tactile interface', 'phantom haptic interface', and 'phantom tactile interface'. References were considered for relevance by perusal of the abstracts, review articles and references outside the scope of the topic were eliminated, as an example, an article about the application of haptic device for aircraft engine maintainability. Lotka's Law of scientific Productivity of Authors was considered.

### **2.2 Histology**

Preparations for attempts and trials to teach blind and visually impaired individuals histology were termed Study 1 while preparations for the simulation of surgery were defined as Study 2. The samples used for Study 1 were formalin fixed and embedded in paraffin wax and were subjected to a standard protocol for H&E staining and subsequently digitalized using either an AXIOCAMMRC5 digital camera mounted on a AXIOSKOP 2 light microscope (both CARL ZEISS AG, Göttingen, FRG) or an OLYMPUS CAMEDIA C-3030 Zoom that was fixed to a BX41 light microscope (both OLYMPUS OPTICAL CO Europa GmbH, Hamburg, FRG). More complex preparations were needed for Study 2 (Landes et al. in press, Landes et al. 2005).

### **2.3 Segmentation**

Haptic rendering required a clear cut separation and classification of anatomical structures. Both were therefore performed using the prototypical SEVISE software, implemented by the authors (Dohrmann et al. 2004, Landes et al. in press). All structures of interest were labeled by creating polygonal contours by mouse click. This resulted in an average of more than 1,000 markers per image.

## 2.4 Rendering

Rendering virtual cells with artificial textures allowed the authors to modify textural complexity as deemed suitable (Fig. 7). Steerable pyramids were used to generate textures with the potential to resemble the original (Portilla & Simoncelli 2000). The textures may be extracted from any source, e.g. from herpesvirus type 6 infection or zygomycosis in humans (Sudhof 2003, Wagner et al. 1997) or from animal experimentation (Turler et al. 2000).

The classified morphological components of the previous segmentation were added to a database that had a significant number of patterns. Based on textual description language a pyramid based texture analysis/synthesis algorithm was applied. The algorithm was adapted from a previously published approach (Heeger & Bergen 1995). In compliance with the information of the textual description an example of the database was taken, the algorithm was applied and the result was a synthetically generated image. The algorithm started with generating an image of uniform random noise, which was adjusted in an iterative progress to

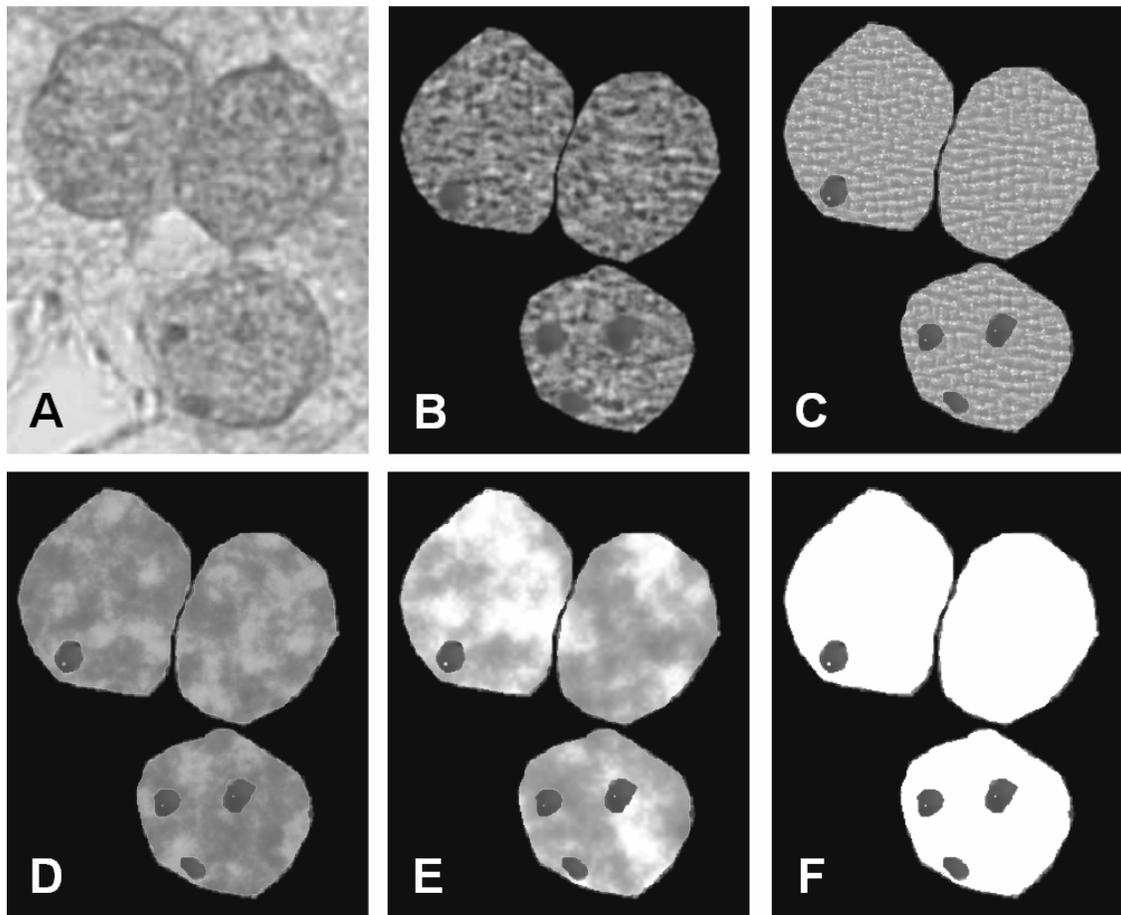


Fig. 7: Real nuclei (A) from a prostate with an adenocarcinoma (H&E) and their virtual representations (B-F). The authors used steerable pyramids to generate textures with different degrees of complexity (density). The mean grey value and the integrated density for instance were 136.1 and 715578 for the real nuclei (A) while the virtual nuclei had a mean grey value and an integrated density of 111.0 and 566569 (B), 144.8 and 699363 (C), 126.7 and 665768 (D), 184.1 and 967631 (E), and 248.7 and 1203507 (F). Such quantification may help specify the best set of textures for each blind or visually impaired person and has to be assessed for each individual separately.

the source. Next, the image was decomposed into an oriented bandpass pyramid. This means it was dissected into a set of subbands by a set of convolution and subsampling operations (De Bonet 1997). The noisy image was subsequently modified by pyramid decomposition and the corresponding subbands of the two pyramids were adjusted by histogram matching. After this, the noise pyramid was collapsed and the example of the database and the new synthetic image were processed in an iterative histogram matching process. The result was a new synthetic image.

## 2.5 Preparation

Reliable 3D models were generated by taking information from the previous and the following segmentation steps into account.

Especially at the point of mesh generation, the authors had to differentiate between Study 1 and Study 2 as the former requires the transformation of a single virtual slide into a polygonal mesh while for Study 2, a volumetric mesh was needed.

Study 1 made it necessary to expand the 2D-image to the third dimension by generating a mesh for the haptic representation (Fig. 8). The standardized color information was therefore mapped to the third dimension. Afterwards a 3D Delaunay triangulation of the scattered data points was applied which resulted in a 3D mesh (Watson 1981). A subsequent mesh reduction reduced the dataset size, minimized possible artifacts and enhanced the operating speed.

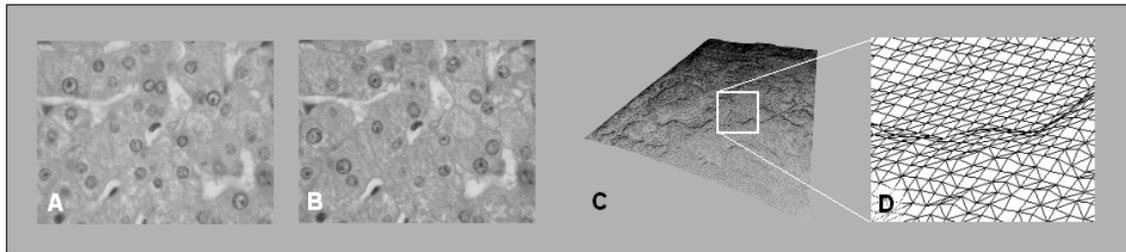


Fig. 8: The mesh generation pipeline from a real histological slide (A) via a virtual histological slide (B) and three dimensionally scattered data points (C) to a 3D Delaunay triangulation (D). Differences in cytoplasmic texture, nuclear sizes and positions help distinguish the real and virtual liver tissue.

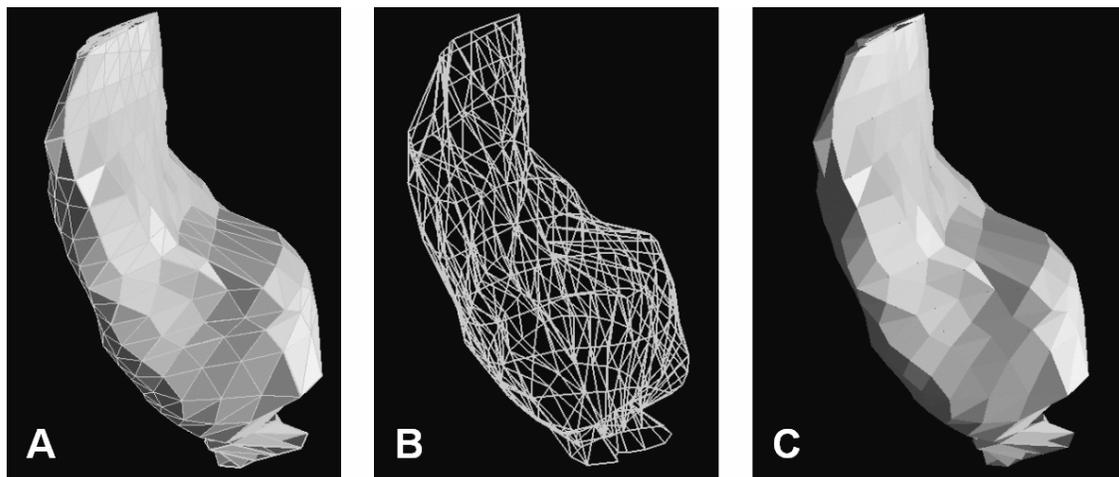


Fig. 9: Meshing a volumetric data set of the lateral pterygoid muscle from a surface mesh (A) to a volume mesh (B) to obtain volume (C).

The volumetric data set associated with Study 2 required a different approach (Fig. 9). The volumetric data set was made up of a sequence of slides having defined metric and relative information on the topology. However, for a correct alignment of the slides as well as the volume it was necessary to apply a registration algorithm. First, a matching algorithm searched the previous layer for polygons that belonged to the identical structure. After matching the image pairs, a reconstruction algorithm arranged the cross sections, copied pixel-by-pixel proportional to their thicknesses into a 3D array, and put them properly in space. This regular 3D model was obtained by resampling the sequence of images in 3D space using local trilinear interpolation.

It was furthermore possible to "smoothen" objects or reduce the surface angularities caused by aberrant vertices, using a modified shortest path algorithm. This resulted in cleaner surface definitions and better rendering by the 3D software. The resulting dataset was visualized by using direct volume rendering techniques at interactive frame-rates. To visualize the segment information of the histological slices in 3D space, the anatomical segments were interpolated and then stored as iso-surfaces. All visualization was performed by combined volume and polygon rendering, offered by the Volume Graphics Library, VGL (VolumeGraphics GmbH: The VolumeGraphics Library, [www.volumegraphics.de](http://www.volumegraphics.de)).

## **2.6 Haptic Device**

A PHANTOM (Personal Haptic Interface Mechanism) device (Fig. 10) and the GENERAL HAPTICS OPEN SOFTWARE TOOLKIT (both SENSABLE TECHNOLOGIES, INC., Woburn, MA, USA) were chosen to give tactile access to the virtual representation of the tissues. The device follows the principles of an industrial robot with a stylus that has an additional button at the end of an arm. They were needed to bring the end effector in any position and the "hand" of the user in a definite orientation to the object. The orientations of the hand could be rolling, yawing and pitching. By this, it was possible to achieve any position in the virtual environment with the tip of the haptic device arm. The positions were presented in a Cartesian coordinate system. Because the phantom device has a six degree of freedom of movement, the position of the link can be described by six-tuple. To arbitrate a haptic feedback, the phantom device decreed three motors providing controllable forces along three of those freedoms with a maximum obtainable force of about 8.5N by a nominal position resolution of 1,100dpi (0.00023cm). The Software Toolkit is a C++ object-oriented library that assists developers by a hierarchical collection of geometric objects and a spatial control. By using the GHOST SDK, the virtual environment is administered as a haptic scene graph.

## **2.7 Haptic Rendering**

Segmentation classified the histological slices into different structures, corresponding to different textures. Different textures implicated in a haptic context were made to feel different as well. Hence, every object of classification was inserted into a scene graph as a separate node but administrated by the scene graph of the SDK as objects that belong to each other. Objects could be added, deleted and properly arranged in space. Furthermore, the SDK supported the calculation of the resulting force for the motors of the haptic device.

The hardware equipment for the developed prototypical application consisted of a dual processor Pentium 4 (XEON) 3.0 GHz WINDOWS XP personal computer with two gigabytes of RAM and a GEFORCE4 6800 graphics card. The application was multi-threaded, with the haptic rendering computation thread running at a high priority to ensure fast update rates.



Fig. 10: SensAble Phantom Device – An interface to simulate haptic interaction.

### 3 Results

The search in PUBMED yielded 121 relevant references. The dataset of references from PubMed shows that the majority of references was published between 2000 and 2005, which can be construed to be indicative of increasing research interest and consequently increasing research output as seen in numbers of publications over time (Fig. 11A). The data also indicate that there was a trend toward collaboration (Fig. 11B).

There are 17 countries which contributed to the research output and this serves as an indicator of the countries currently involved in research activity on this topic (Fig. 11C). Canada, Belgium and Greece contributed 0.8% of the articles each, Norway and Denmark 1.65%, France, Switzerland and Italy 2.47%, South Korea, Australia and Hong Kong 3.3%, Sweden and the Netherlands 4.13%, the United Kingdom 4.95%, Japan 7.43%, Germany 14.04%, and the United States of America contributed 39.66%. For 2.47% of the articles no country was designated.

English remains the predominant language of publication. There were 114 (94.21%) articles in English; 6 (4.9%) in German; and 1 (0.82%) in Japanese.

The search using INSPEC yielded 150 references of which 45 (30%) were journal articles all published between 2000 and 2005; and 105 (70%) were conference papers all published between 2000 and 2005. From the dataset of 45 journal articles there were 4 (8.8%) by one author; 6 (13.33%) by two authors; 8 (17.77%) by three authors; 19 (42.22%) by four authors; 4 (8.8%) by five authors; 1 (2.22%) by six authors; 2 (4.44%) by eight authors; and 1 (2.22%)

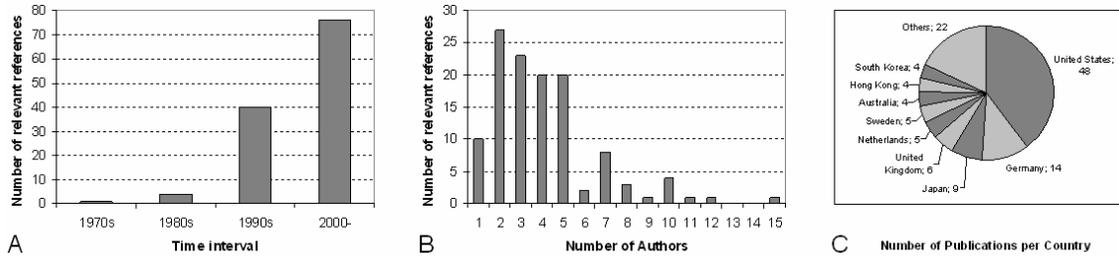


Fig. 11: Results of bibliometry on the use of haptic devices in the biomedical sciences (according to PubMed, August 2005).

by an anonymous source. From the dataset of 105 conference papers, it can be assessed that the trend toward collaboration in research and output is comparable to journal articles. The conference papers indicate that 8 (7.61%) were by one author; 22 (20.95%) were by two authors; 16 (15.23%) were by three authors; 21 (20%) were by four authors; 11 (10.47%) were by five authors; 13 (13.38%) were by six authors; 10 (9.52%) were by seven authors; 2 (1.90%) were by eight authors; and 2 (1.90%) were from anonymous sources.

Spain, Malaysia, Finland, Latvia, Lithuania, Slovenia, the Czech Republic, and Mexico all contributed 1 paper (0.95%) each; the Netherlands, China, Canada, Bulgaria, and Singapore contributed 2 papers (2.85%) each; the United Kingdom and Germany contributed 3 (2.85%) each; Switzerland contributed 4 (3.80%); Italy contributed 6 (5.71%); France contributed 11 (10.47%); South Korea contributed 14 (13.33%); the United States contributed 19 (18.09%) and Japan contributed 27 (25.7%).

For Study 1, the virtual slide was represented by a dense scattered set of points resulting in a dense mesh the size of which had to be reduced. For blind and visually impaired individuals pronounced data reduction needed to take place. It was therefore necessary to generate a smooth mesh rather than a mesh that offers too many features. This led to compromises on a seemingly authentic haptic feeling. For Study 1, only a surface mesh was needed as only data of single slides had to be transformed. These meshes were relatively easy to generate, had a high operating speed and provided excellent haptic properties.

For simulated surgery (Study 2), however, surface meshes are inadequate as they do not support the penetration of volumes. This approach made it necessary to generate a surface mesh, a volume mesh and finally a volume set to support the virtual cutting of the elaborate three-dimensional models (Dohrmann et al. 2004). It now only depended on virtual properties of the simulated material of the object whether it was more or less easily cut. For example, the virtual scalpel was programmed not to penetrate virtual bone while it should easily cut muscle tissue.

There was no classical data reduction in terms of data compression associated with the transfer of graphic representation to haptic enhanced representation. In fact, the amount of data was reduced although the information content remained constant. This was achieved by increasing the significance of single information units and reducing the entropy of information, respectively.

## 4 Discussion

The present study shows how much transformation of information may differ with regard to the task. Virtual histological slides may either help generate an output with a reduced or with an augmented data size. The latter is a protracted exercise which may not be in keeping with the “publish or perish” code of practice in the medical sciences. This hypothesis is supported

by the results of the bibliometric survey. Its objective was to get a representative perspective of the coverage of the literature on the application of haptic device in biomedical research and practice. There is wide geographic scatter of the contributions of conference papers and in this regard may be considered to indicate wider geographic coverage than journal articles.

The distribution of languages may be attributed to the assertion that it is usually more difficult to get cited when published in non-English journals. The result is that English has become the first language of choice in which to get articles published as researchers will undoubtedly aspire to get their research results accepted for publication and so increase the likelihood of their articles being acknowledged by the academic community and consequently cited in the literature.

Comparing the results for PUBMED and INSPEC suggests that the biomedical sciences may currently provide less applications for haptic devices than other areas.

As described above, calculus for Study 2 was more complex as study 1 required “only” a polygonal mesh while Study 2 was based on a volumetric model. Data reduction was considered helpful with regards to study 1. This was also reflected by the underlying rendering concept which provides virtual cells with textures. First and second order morphometrical statistics can be applied to analyze these structures (Haralick et al. 1973, Julesz 1975). For study 1, rendering results may be systematically reduced in complexity which may be monitored by quantitative texture analysis. Data reduction was therefore possible by either texture modifications (virtual cells) or mesh reduction (3D Delaunay triangulation). It is not known whether preference for any degree of data reduction correlates for instance with low- and high-proficiency blind braille reading (Davidson et al. 1992). Several trials have therefore to be performed to evaluate this methodology.

Study 2 is even farther from being routinely applicable at this point in time. Three-dimensional anatomical reconstruction in virtual environments is expected to permit improved teaching, exploration of the spatial relationships at freely eligible angles, faster acquisition and better long-term maintenance of anatomic knowledge, and the simulation of surgery. The value of such a simulation first depends upon the exactness of the training model. However, earlier attempts e.g. in malformation surgery of cleft-lip and palate have been restricted to mere visual animation (Cutting et al. 2002). Secondly, in-depth education of junior surgeons requires the sensible feedback of tissue resistance under manipulation. Such refined training will prospectively enhance the postoperative results of patient safety as has long been performed in other high hazard activity as for instance aviation. Controllable near real-life complexity is desired for virtual surgery to help the trainee master not only uneventful operations. Photorealistic visualization algorithms are most suitable to optimize such simulation programs (Spicer & Apuzzo 2003) and maybe supported by texture mapping approaches. The application of artificial neural network technology (Linder et al. 2003, Mohamed et al. 2003a, Mohamed et al. 2003b) may help improve the performance of virtual surgery programs even more.

The transformation of visual data to tactile information is expected to become an important input to surgery. Haptic feedback allows the surgeon to perform and compare the feasibility and dynamic results of several operation techniques, e.g., muscle transpositions. Prospective volumetry, mesh and finite-element supported simulation of muscle contraction will help compare force distribution in the normal, pathological and postoperative situation. Application of a haptic device combined with virtual histology will help make individual operation planning possible. The ideal reconstruction technique for a certain patient may then be selected based on data obtained by preoperative simulation.

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